Report Number: 208S-TRC-03-001

Vehicle Safety Compliance Testing for FMVSS 208 for Occupant Crash Protection

Sled Test

Ford Motor Company
2003 Ford F150
NHTSA Number: C30201
TRC Inc. Test Number: S030110

Transportation Research Center Inc.
10820 State Route 347
East Liberty, OH 43319

Test Date: January 10, 2003
Report Date: January 28, 2003

Final Report

Prepared For:
U. S. Department of Transportation
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance (NVS-220)
400 Seventh Street, S.W., Room No. 6115
Washington, DC 20590

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16. Abstract

An FMVSS 208 Section 13 compliance sled test was conducted on a 2003 Ford F150 Regular Cab Pickup Truck, NHTSA No. C30201 in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208S-01 for the determination of FMVSS 208 compliance. Possible test failures identified were as follows: None

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Purpose

This Federal Motor Vehicle safety Standard (FMVSS) 208 compliance sled test is part of the FMVSS compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by the Transportation Research Center Inc. (TRC Inc.) under Contract No. DTNH22-98-D-01055. The purpose of this test was to determine if the subject vehicle, a 2003 Ford F150 regular cab pickup truck, NHTSA No. C30201 meets the performance requirements of FMVSS 208, "Occupant Crash Protection," in the impact simulation sled test mode.

Test Procedure

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208S-01, dated January 15, 1998. Data was obtained relative to FMVSS 208, "Occupant Crash Protection," performance.

The sled test vehicle was instrumented with three (3) accelerometers to measure longitudinal accelerations. The sled was instrumented with one (1) longitudinal accelerometer, which is prefiltered with an analog filter to 200 Hz as an integral part of the sled firing circuit, and two (2) additional accelerometers: the primary accelerometer for pulse and integrated velocity determination and a backup accelerometer. In addition, the sled was instrumented with one (1) light trap to measure velocity and two (2) airbag firing timing circuits.

The sled test vehicle contained two (2) Part 572 E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to the dummy placement procedure specified in Appendix B of the Laboratory Test Procedure. The dummies were not restrained by seat belts.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations; chest deflection potentiometers; left and right femur load cells to measure axial forces; and upper neck load cells to measure longitudinal, lateral, and vertical forces and moments.

The forty-two (42) data channels were digitally sampled at 12,500 samples per second and processed per Sections 11.7 through 11.9 of the Laboratory Test Procedure.

The sled test event was recorded by one (1) real-time motion picture camera and six (6) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

Test Results Summary

This FMVSS 208 compliance sled test was conducted by TRC Inc. on January 10, 2003.

The test vehicle, a 2003 Ford F150 regular cab pickup truck, NHTSA No. C30201, does appear to comply with the performance requirements of FMVSS 208 in the impact simulation sled test mode as measured by Hybrid III 50th percentile male dummies. .

	FMVSS 208 Max. Allowable Injury Assessment Values	Driver	Passenger
HIC	1000	392	218[1]
Chest g	60 g	34.2	44.9
Chest Displacement	3 inches	0.6	0.2
Left Femur	2250 lbs	1185	975
Right Femur	2250 lbs	1523	1121
Neck Extension	57 Nm	3.3	28.2
Neck Flexion	190 Nm	36.6	89.9
Neck Tension	3300 N	1095	272
Neck Compression	4000 N	228	1912
Neck Shear	3100 N	630	1665

The subject vehicle, a 2003 Ford F150, NHTSA No. C30201, appears to meet the other FMVSS 208 requirements for which it was tested. These results are shown in the data sheets that are included in this report.

The sled test vehicle was equipped with air bags at the driver and passenger seating positions. The dummies were not restrained by seat belts. The sled carriage was accelerated to 17.4 g with an integrated velocity change of 29.3 mph. The airbags were triggered at 20.16 milliseconds after 0.5 g acceleration was measured by the firing circuit. Following subsequent digital data processing and filtering the acceleration signal to Channel Class 60, the airbag event trigger signal was 21.28 ms after the 0.5 g acceleration level was indicated.

---

[1] See Data Acquisition Explanations

Data Acquisition Explanations

The sled buck's light trap X-axis acceleration data channel, SLDXV, exhibited data spikes at approximately 250 and 275 milliseconds. These data spikes did not affect peak test velocity.

The right front passenger's head X-axis, Y-axis, and Z-axis accelerometers, HEDXG2, HEDYG2, and HEDZG2, exhibited a data spike at approximately 114 milliseconds, which appears to coincide with the windshield cracking. This spike can also be seen in the calculated resultant acceleration data channel, HEDRG2, and occurs during the time frame of the calculated HIC value.

Sled Test Summary

NHTSA number: C30201

Test type: Alternate FMVSS 208 Sled

Test date: 01/10/03

Test time: 1414

Ambient temperature at impact area: 70° F

Vehicle year/make/ model/body style: 2003/Ford/F150/Truck (Regular cab pickup truck)

Dummy Info:	Driver #230	Front Passenger #314
Type:	Hybrid III 50th Male	Hybrid III 50th Male
Location:	Left front	Right front
Restraint:	Airbag	Airbag
Number of data channels:	15	15

Number of Cameras:	
Real-time:	1
High-speed:	6

Door Opening Data:	
Left Front:	Difficult
Right Front:	Difficult

Front Seat Data:		
Seat track failure:	None	None
Seat back failure	None	None

Visible Dummy Contact Points:	Driver	Passenger
Head:	Airbag/Headliner/Sun Visor/ Passenger Dummy	Airbag/Sun Visor/Roof/ Driver Dummy
Chest:	Airbag	Airbag
Left knee:	Knee bolster	Glove box
Right knee:	Knee bolster	Glove box

General Test and Vehicle Parameter Data for the Sled Test Vehicle

Test Vehicle Information:

Vehicle year/make/ model/body style:	2003/Ford/F150/Truck (Regular cab pickup truck)			
Color:	Red			
VIN:	2FTRF17233CA12840			
NHTSA number:	C30201			
Engine data:				
Placement:	Inline V			
Cylinders:	6			
Displacement:	4.2 liters			
Transmission data:	_5_ speed,	_X_ manual,	__ automatic,	_X_ overdrive
Final drive:	__ fwd,	_X_ rwd,	__ 4wd	
Date vehicle received:	12/18/2002			
Odometer reading:	132			
Dealer's name and address:	Ed Schmidt Ford 9760 Waterville-Swanton Rd. Waterville, OH 43566			

Major Options:

Power steering	Yes	Other: 6050# GVWR package; passenger airbag on/off switch; 4-wheel disk brakes with 4-wheel ABS
Power brakes	Yes	
Power windows	No	
Air conditioning	No	
Power door locks	No	

Remarks: None

General Test and Vehicle Paramcter Data for the Sled Test Vehicle, Cont'd.

Data from Vehicle's Certification Label:

Vehicle manufactured by:		Ford Motor Company
Date of manufacture:		09/02
VIN:		2FTRF17233CA12840
GVWR:		6050 lbs
GAWR:	Front:	2800 lbs
	Rear:	3500 lbs

Tire Data:

Tire pressure with maximum capacity vehicle load:	
Front:	35 psi
Rear:	35 psi
Recommended tire size:	235/70/R16
Load index/speed rating:	104S
Recommended cold tire pressure:	
Front:	35 psi
Rear:	35 psi
Size of tires on vehicle:	235/70/R16
Spare tire:	235/70/R16
Vehicle capacity data:	
Type of front seats:	Bench
Number of occupants (from count of seat belts):	
Front	3
Rear	N/A
Total	3

Remarks: None

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd.

Weight of test vehicle as received (with maximum fluids):

Right front	1175.0	lbs	Right rear	844.4	lbs
Left front	1175.0	lbs	Left rear	906.1	lbs
Total front weight	2350.0	lbs	(57.3% of total vehicle weight)		
Total rear weight	1750.5	lbs	(42.7% of total vehicle weight)		
Total delivered weight	4100.5	lbs			

Calculation of test vehicle's target test weight:

RCLW = Rated Cargo and Luggage Weight

UDW = Unloaded Delivered Weight (4100.5 lbs)

DSC = Designated Seating Capacity (3)

RCLW[1] = GVWR - UDW - 150(DSC) = 1499.5 > 300

Target test weight = UDW + RCLW + (Number of Hybrid III dummies x 167 lbs per dummy)

Target test weight = 4100.5 + 300 + 334 = 4734.5 lbs

Weight of test vehicle with two dummies and 300.9 lbs of cargo weight:

Right front	1301.8	lbs	Right rear	1147.5	lbs
Left front	1166.2	lbs	Left rear	1119.9	lbs
Total front weight	2468.0	lbs	(52.1% of total vehicle weight)		
Total rear weight	2267.4	lbs	(47.9% of total vehicle weight)		
Total test weight	4735.4	lbs			

Remarks:

Weight of ballast secured in vehicle cargo area: None

Components removed to meet target test weight: N/A

---

[1] RCLW is set at maximum of 300 lbs for target test weight determination.

General Test and Vehicle Parameter Data for the Sled Test Vehicle, Cont'd.

Test Vehicle Attitude:

As delivered door sill angle:	1.4° Nose down
As tested door sill angle:	1.0° Nose down
Fully loaded door sill angle:	0.7° Nose down
Vehicle Wheelbase:	138.5 inches (from Owner's Manual)

Fuel System Data:

Fuel system capacity from owner's manual:	30.0 gallons
Useable capacity figure furnished by COTR:	30.0 gallons

Remarks: The roll angle measurements were within 1 inch of each other.

The left and right side measurements were 34.0 inches and 34.1 inches respectively.

Post-Impact Data

Test number:	S030110
NHTSA number:	C30201
Test date:	01/10/03
Test time:	1414
Test type:	Alternate FMVSS 208 Sled
Impact angle:	0°
Ambient temperature at impact area:	70° F
Temperature in occupant compartment:	70° F

Sled carriage velocity:

Integrated velocity from the integration of the entire sled acceleration:	29.3 mph
Measured velocity from the light trap device attached to the sled (backup):	28.9 mph
Specified integrated velocity range:	28 to 30 mph

Sled carriage acceleration:

Acceleration:	17.4 g
Specified acceleration range:	16.0 g - 18.2 g

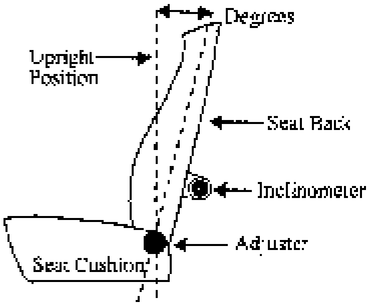
Sled carriage acceleration duration:

Time from T-0(-0.5 g) to 0.0 g:	126.1 ms
Specified acceleration duration:	120 - 130 ms

The sled acceleration curve was at a lower g level than specified from approximately 69.7 ms to 70.0 ms.

Seat and Steering Column Positioning Data

Vehicle: 2003/Ford/F150/Truck NHTSA No.: C30201



Front Seat Assembly
Left Side View

Nominal Design Riding Position:

Driver Seat: Seat Back Angle = 21.5° Fixed seat back position - The seat back angle was measured by placing the inclinometer against the outboard seat back frame approximately 13 inches above the pivot.

Passenger Seat: Seat Back Angle = 21.5° Fixed seat back position - The seat back angle was measured by placing the inclinometer against the outboard seat back frame approximately 13 inches above the pivot.

Seat Fore and Aft Positions:

Driver Seat: Mid position - manual adjustment. The bench seat was moved full forward and full rearward to locate the center of travel: the 10th latch position of 19 positions.

Passenger: Mid position - manual adjustment. The bench seat was adjusted from the driver's side; see above.

Steering Column Adjustments:

The steering column was not adjustable.

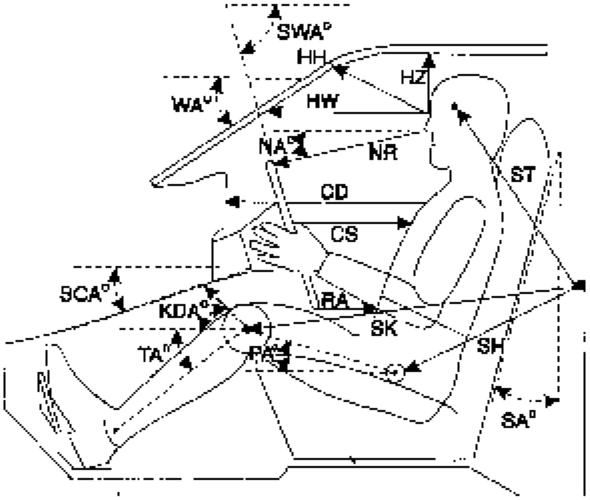
Dummy Measurement Data for Front Seat Occupants

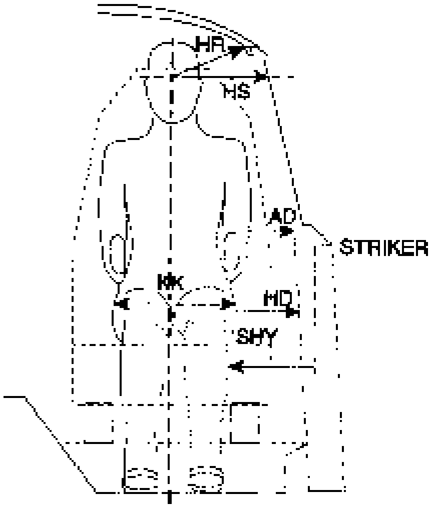
Designation	Type of Measurement	Driver (Serial #230)	Passenger (Serial #314)
WA	Windshield angle	33.8°	N/A
SWA	Steering wheel angle	20.5°	N/A
SCA	Steering column angle	21.0°	N/A
SA	Seat back angle	21.5°	21.5°
HZ	Head to roof	9.9 in	9.3 in
HH	Head to header	18.4 in	18.1 in
HW	Head to windshield	26.6 in	26.9 in
HR	Head to side header	9.1 in	8.6 in
NR	Nose to rim	17.6 in	N/A
NA	Nose to rim angle	12.0°	N/A
CD	Chest to dash	23.8 in	23.8 in
CS	Steering wheel to chest	14.0 in	N/A
RA	Rim to abdomen	8.9 in	N/A
KDL	Left knee to dash	5.9 in	6.4 in
KDR	Right knee to dash	6.1 in	6.5 in
KDA	Outboard knee to dash angle	18.6°	22.6°
PA	Pelvis angle	24.7°	22.7°
TA	Tibia angle	63.4°	66.6°
KK	Knee to knee	13.5 in	10.6 in
ST[1]	Striker to head	25.1 in	25.5 in
	Striker to head angle	-71.3°	-71.7°
SK[1]	Striker to knee	29.5 in	30.9 in
	Striker to knee angle	-7.2°	-8.4°
SH[1]	Striker to H-point	14.6 in	15.0 in
	Striker to H-point angle	7.6°	0.9°
SHY	Striker to H-point (Y dir.)	11.1 in	9.8 in
HS	Head to side window	12.4 in	12.6 in
HD	H-point to door	8.7 in	7.5 in
AD	Arm to door	5.7 in	5.6 in

The seat back angle (SA°) is measured relative to vertical.
All other angles are measured relative to horizontal.

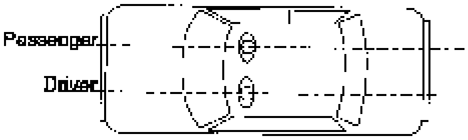
[1] A negative angle indicates the measurement point was located below the striker.

Dummy Measurement Locations for Front Seat Occupants

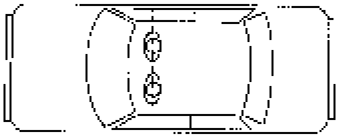




VERTICAL LONGITUDINAL PLANE



VERTICAL TRANSVERSE PLANE



Descriptions of Dummy Measurements

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

The following measurements are to be made within a vertical longitudinal plane.

*	HH	Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header.
*	HW	Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level.
	HZ	Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level.
*	CS	Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level.
*	CD	Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Then measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See diagram.
	RA	Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.
	NR	Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA).

* Measurement used in Data Tape Reference Guide

*[1] KDL,

KDR Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See diagram.

SH,

SK,

ST Striker to Hip, Knee, and Head, these measurements are to be taken in the X-Z plane measured from the forward most center point on the striker to the center of the H-point, outer knee bolt, and head target. When taking this measurement a firm device that can be rigidly connected to the striker should be used. Use a level. The angles of these measurements with respect to the horizontal should also be recorded. The measurement in the Y (transverse) direction from the striker to the H-point should also be taken (SHY). See diagram.

The following measurements are to be made within a vertical transverse plane.

HS Head to Side Window, taken from the point where the dummy's nose meets his forehead (between his eyes) to the outside of the side window. In order to make this measurement, roll the window down to the exact height which allows a level measurement. Use a level. See diagram.

* AD Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid II dummy to the first point it hits on the door. In the case of a Hybrid III dummy, measure from the bolt on the outer biceps. When a SID is used make the measurement from the center of the bottom of the arm segment where it meets the dummy's torso.

* HD H-point to Door, taken from the H-point on the dummy to the closest point on the door. Use a level.

* HR Head to Side Header, measure the shortest distance from the point where the dummy's nose meets his forehead (between his eyes) to the side edge of the header just above the window frame, directly adjacent to the dummy.

* Measurement used in Data Tape Reference Guide

[1] Only outboard measurement is referenced in Data Tape Reference Guide

Descriptions of Dummy Measurements, Cont'd.

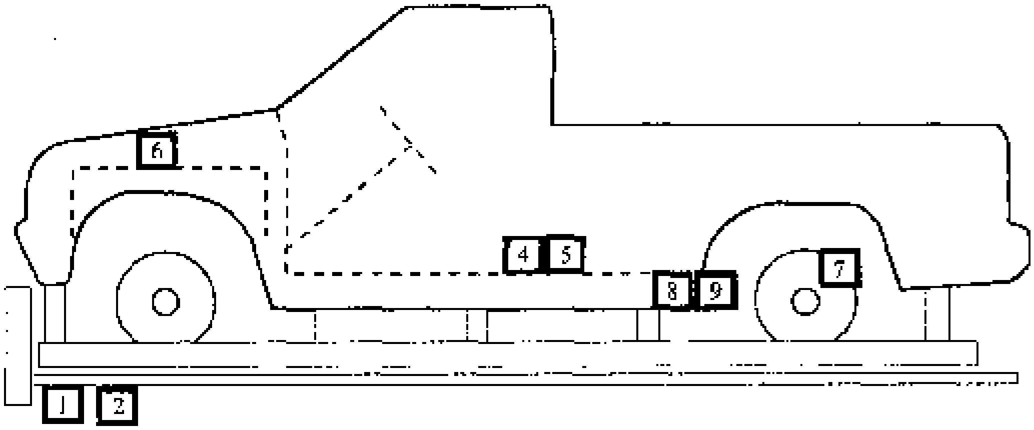
SHY	Striker to H-point, taken from a rod rigidly connected to the forward most center point on the striker to the H-point. Use a level. See diagram.
KK	Knee to Knee, for Hybrid II dummies measure the distance between knee pivot bolt head outer surfaces. For Hybrid III dummies measure the distance between the outboard knee clevis flange surfaces. (This measurement may not be exactly transverse.)

Angles

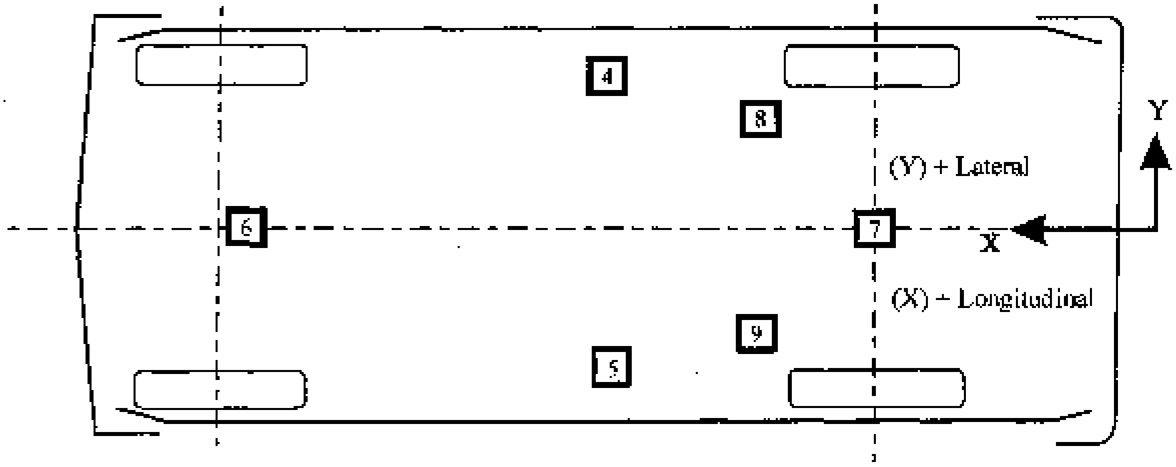
SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvis or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
SWA	Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.
SCA	Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
NA	Measure the angle made when taking the measurement NR with respect to the horizontal.
KDA	Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See diagram.
WA	Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
TA	Tibia Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

* Measurement used in Data Tape Reference Guide

Vehicle Accelerometer Placement



Side View



Bottom View

Vehicle Data Summary and Accelerometer Locations

TEST NUMBER: S030110

No. LOCATION	X	Y	POSITIVE DIRECTION[1]		NEGATIVE DIRECTION[1]	
1 SLED ACCELERATION PRIMARY	165.6 in	-1.0 in	0.9 g	@ 131.1 ms	17.4 g	@ 52.1 ms
2 SLED ACCELERATION BACKUP REDUNDANT	165.6 in	-1.0 in	1.0 g	@ 131.0 ms	17.4 g	@ 51.9 ms
3 SLED VELOCITY						
MEASURED			0.1 mph	@ 9.2 ms	28.9 mph	@ 127.5 ms
INTEGRATED [2]			---	---	29.3 mph	@ 125.8 ms
4 LEFT REAR FLOORPAN LONGITUDINAL	117.9 in	-27.5 in	1.6 g	@ 131.7 ms	26.9 g	@ 56.0 ms
5 RIGHT REAR FLOORPAN LONGITUDINAL	117.3 in	27.8 in	1.7 g	@ 176.0 ms	23.2 g	@ 62.9 ms
6 TOP ENGINE LONGITUDINAL	183.3 in	1.6 in	4.9 g	@ 131.2 ms	19.3 g	@ 50.6 ms
7 REAR AXLE LONGITUDINAL	43.4 in	0.0 in	1.6 g	@ 129.7 ms	18.4 g	@ 55.4 ms
8 LEFT VEHICLE FRAME LONGITUDINAL	66.1 in	-20.4 in	1.6 g	@ 130.6 ms	18.4 g	@ 54.2 ms

*

Vehicle Data Summary and Accelerometer Locations, Cont'd.

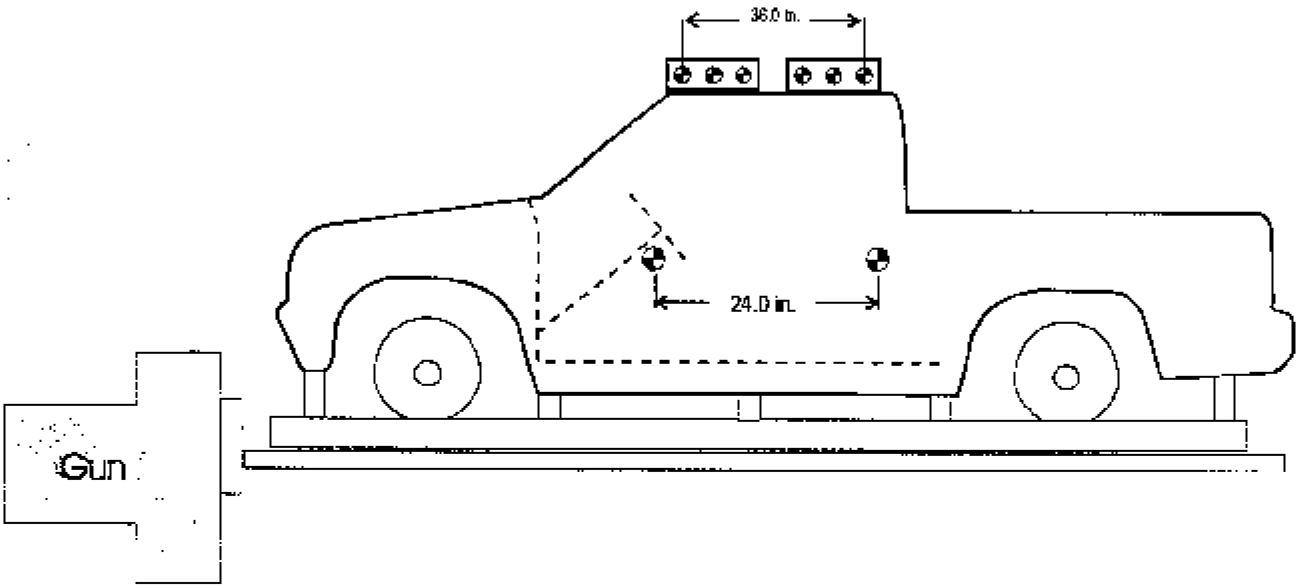
TEST NUMBER: S030110 No. LOCATION	X	Y	POSITIVE DIRECTION[1]	NEGATIVE DIRECTION[1]
9 RIGHT VEHICLE FRAME LONGITUDINAL	65.9 in	20.4 in	1.4 g @ 130.9 ms	18.2 g @ 56.2 ms
10 DRIVER AIRBAG EVENT			1.0 volt @ 21.3 ms	--- ---
11 PASSENGER AIRBAG EVENT			1.0 volt @ 21.3 ms	--- ---

REFERENCE: X: + FORWARD FROM VEHICLE REAR SURFACE
Y: + RIGHTWARD FROM SLED CARRIAGE CENTERLINE

[1] Sign convention per SAEJ211 March 1995.

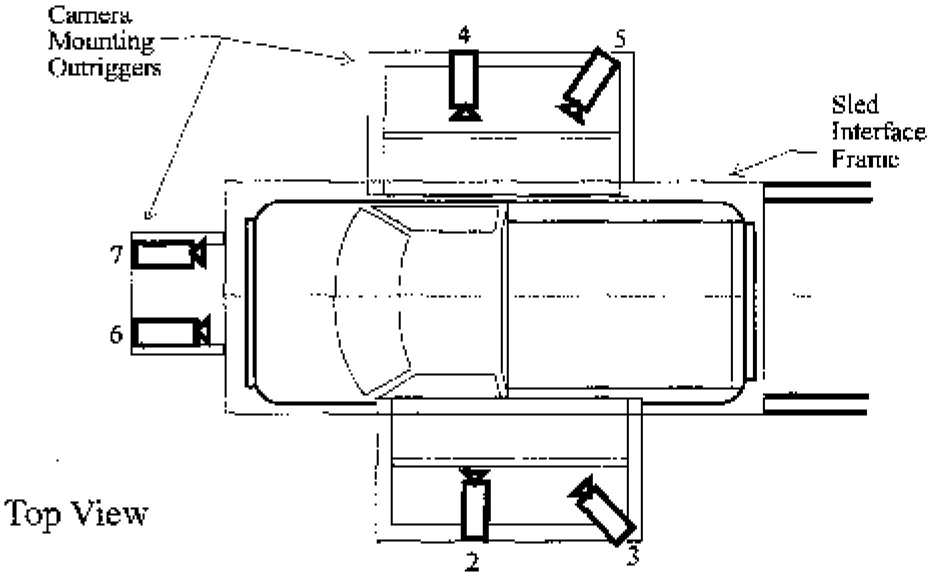
[2] No positive data in time frame of interest.

REFERENCE PHOTO TARGETS

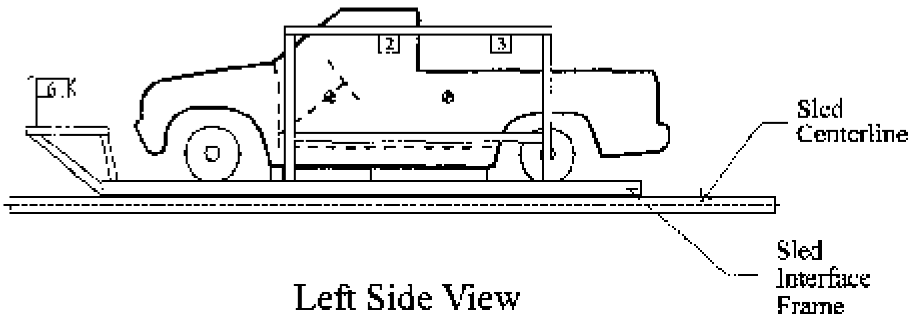


LEFT SIDE VIEW

Camera Positions



Camera Frame Rates:
#1 = 24 fps
All Others = 1,000 fps



Motion Picture Camera Locations

Vehicle year/make/model/body style: 2003/Ford/F150/Truck NHTSA No.: C30201 Test Number: S030110

Camera Number	View	Camera Positions[1] X	Camera Positions[1] Y	Camera Positions[1] Z	Camera Angle[2]	Film Plane to Head Target	Camera Lens	Film Speed
1	Left side view offboard	91.4 in	309.4 in	48.7 in	-1.4°	290.0 in	Zoom	24 frames/s
2	Left side view wide	73.8 in	73.7 in	65.4 in	-3.2°	53.7 in	8 mm	995 frames/s
3	Left side view over shoulder	98.0 in	45.6 in	75.0 in	-14.1°	35.5 in	8 mm	890 frames/s
4	Right side view wide	73.8 in	74.1 in	65.0 in	-3.1°	54.7 in	8 mm	998 frames/s
5	Right side view over shoulder	99.6. in	44.7 in	73.6 in	-12.3°	35.9 in	8 mm	1002 frames/s
6	Front view - driver	26.2in	16.4 in	67.1 in	-3.5°	55.7 in	8 mm	1020 frames/s
7	Front view - passenger	24.8 in	17.8 in	67.7 in	-2.1°	56.0 in	8 mm	1000 frames/s

[1] X: Film plane to front of sled
Y: Film plane to sled centerline
Z: Film plane to top of sled

[2] Angle: Film plane of camera downward from horizontal plane

FMVSS 208 Occupant Injury Data

Vehicle: 2003/Ford/F150/Truck NHTSA No.: C30201 Date: 01/10/03

Maximum Acceleration Values: (g)[1]	Driver Dummy #230	Passenger Dummy #314
Head Channel X	-63.4	-75.3[2]
Head Channel Y	-10.5	-66.1[2]
Head Channel Z	25.2	80.9[2]
HEAD RESULTANT	64.0	113.7[2]
Chest Channel X	-33.8	-44.1
Chest Channel Y	7.0	2.9
Chest Channel Z	10.0	29.7
CHEST RESULTANT	35.5	47.5

Head Injury Criteria (HIC) Values:

HIC (36 ms)	392	218[2]
t_1 = (ms)	110.48	107.68
t_2 = (ms)	146.48	143.68

The maximum HIC time interval from t_1 to t_2 is 36 milliseconds.

Chest Injury Criteria (Clip) Values:

CLIP (g)	34.2	44.9
t_1 = (ms)	102.06	113.97
t_2 = (ms)	105.02	117.68
Chest Deflection (in)	0.6	0.2

---

[1] Sign Convention per SAE J211, March 1995

[2] See Data Acquisition Explanations

FMVSS 208 Occupant Injury Data, Cont'd.

Vehicle: 2003/Ford/F150/Truck NHTSA No.: C30201 Date: 01/10/03

Max. Compressive Femur Forces:	Driver Dummy #230	Passenger Dummy #314
Left Side (lbs)	1185.2	974.5
Right Side (lbs)	1523.5	1120.9

Neck Injury Criteria:	Driver Dummy #230	Passenger Dummy #314
Peak Flexion Bending Moment (N-m)	36.6	89.9
Peak Extension Bending Moment (N-m)	3.3	28.2
Peak Axial Tension (N)	1094.7	271.7
Peak Axial Compression (N)	228.1	1912.1
Peak Positive X-axis Shear (N)	630.4	1665.4
Peak Negative X-axis Shear (N)	239.1	176.1

FMVSS 208 Seat Belt Warning System Check

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/07/2003

Complete the following to determine which seat belt warning system option (S7.3(a)(1) or S7.3(a)(2)) is used. (Manufacturers may use either option.)

A. With occupant in driver's position and lap belt in stowed position and ignition switch placed in "Start/On" position:

A.1 S7.3(a)(1)
Time duration of audible warning signal = 6 seconds
(4 to 8 seconds)

Time duration of reminder light operation = remains on
(no less than 60 seconds)

A.2 S7.3(a)(2)
Time duration of audible warning signal = seconds
(4 to 8 seconds) (see 49 USCS @ 30124)

Time duration of reminder light operation = seconds
(4 to 8 seconds)

B. With occupant in driver's position and lap belt in use and the ignition switch placed in "Start/On" position:

B.1 S7.3(a)(1)
Time duration of audible warning signal = 0 seconds
(audible warning should not operate)

Time duration of reminder light operation = 0 seconds
(reminder light does not operate)

B.2 S7.3(a)(2)
Time duration of audible warning signal = seconds
(audible warning should not operate)

Time duration of reminder light operation = seconds
(4 to 8 seconds)

C. Note wording of visual warning:
Fasten Seat Belt
Fasten Belt
Symbol 101 ☒

FMVSS 208 Readiness Indicator

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/07/2003

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement (11/8/94 legal interpretation).

Is the system totally mechanical? ☐ Yes; ☒ No

Describe the location of the readiness indicator: Lower right corner of instrument cluster

Is the readiness indicator clearly visible to the driver? ☒ Yes; ☐ No

Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided? ☒ Yes; ☐ No

FMVSS 208 Air Bag Labels

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/06/2003

1. Air Bag Maintenance Label and Owner's Manual Instructions:

   1.1 Does the manufacturer recommend periodic maintenance or replacement of the air bag? ☐ Yes (Go to 1.2) ☒ No (Go to 2)

   1.2 Does the Vehicle have a maintenance or replacement label? ☐ Yes-Pass ☐ **No-Fail**

   1.3 Does the label contain one of the following? ☐ Yes-Pass ☐ **No-Fail**

   ☐ Schedule on label specifies month and year

   ☐ Schedule on label specifies vehicle mileage

   ☐ Schedule on label specifies interval measured from date on certification label

   1.4 Is the label permanently affixed within the passenger compartment? ☐ Yes-Pass ☐ **No-Fail**

   1.5 Is the label lettered in English? ☐ Yes-Pass ☐ **No-Fail**

   1.6 Is the label in block capitals and numerals? ☐ Yes-Pass ☐ **No-Fail**

   1.7 Are the letters and numerals at least 3/32 inch high? ☐ Yes-Pass ☐ **No-Fail**

   1.8 Does the owner's manual set forth the recommended schedule for maintenance or replacement? ☐ Yes-Pass ☐ **No-Fail**

2. Does the owner's manual: (S4.5.1 (f))

   2.1 Include a description of the vehicle's air bag system in an easily understandable format? ☒ Yes ☐ **No-Fail**

   2.2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating positions? ☒ Yes ☐ **No-Fail**

2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions? ☒ Yes ☐ **No-Fail**

2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?

☒ Yes ☐ **No-Fail**

2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to insure maximum safety protection for those occupants? ☒ Yes ☐ **No-Fail**

2.6 Explain that no objects should be place over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

☒ Yes ☐ **No-Fail**

3. Does the Vehicle:

3.1 Provide an automatic means to ensure that the air bag does not deploy when a child seat or child with a total mass of 30 kg or less is present on the front outboard seat? ☐ Yes ☒ No

3.2 Incorporate sensors, other than or in addition to weight sensors, which automatically prevent the passenger air bag from deploying in situations in which it might have an adverse effect on infants in rear-facing child seat, and unbelted or improperly belted children? ☐ Yes ☒ No

3.3 Have a passenger air bag designed to deploy in a manner that does not create a risk of serious injury to infants in rear-facing child seats, and unbelted or improperly belted children? ☐ Yes ☒ No

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a Sun Visor Warning Label (S4.5.1(b)), an air bag alert label (S4.5.1(c)) or a label on the dash (S4.5.1(e)) and **this check sheet is complete. (S4.5.1) If no to 3.1, 3.2, and 3.3, go to 4.**

4. Sun Visor Warning Label

4.1 Is the label permanently affixed (may be permanent marking or molding) to either side of the sun visor at each front outboard seating position with an air bag?

Driver side	☒ Yes-Pass	☐ **No-Fail**
Passenger side	☒ Yes-Pass	☐ **No-Fail**

4.2 Does the label conform in content **(vehicles without back seats may omit the statement: "The BACK SEAT is the SAFEST place for children.")** (S4.5.1(b)(2)(v)) to the label shown in either Figure 6a or 6b as appropriate at each front outboard seating position with an air bag? (S4.5.1(b)(2))

4.2.1 Dual air bags

Driver side	☒ Yes-Pass	☐ **No-Fail**
Passenger side	☒ Yes-Pass	☐ **No-Fail**

4.2.2 Vehicles with driver air bag ONLY - either 4.2.1 or 4.2.2 is applicable, not both. (S4.5.1(b)(2)(iv))

4.2.2.1 Does the label conform on content to the label shown in either Figure 6a or 6b as appropriate?

☒ N/A

Driver side	☐ Yes-Pass	☐ **No-Fail**

4.2.2.2 Does the label conform in content to the label shown in Figure 6a where the label can be modified to omit the pictogram and the message may read:

DEATH or SERIOUS INJURY can occur.

. Sit as far back as possible from the air bag.

. ALWAYS use SEAT BELTS and CHILD RESTRAINTS.

. The BACK SEAT is the SAFEST place for children.

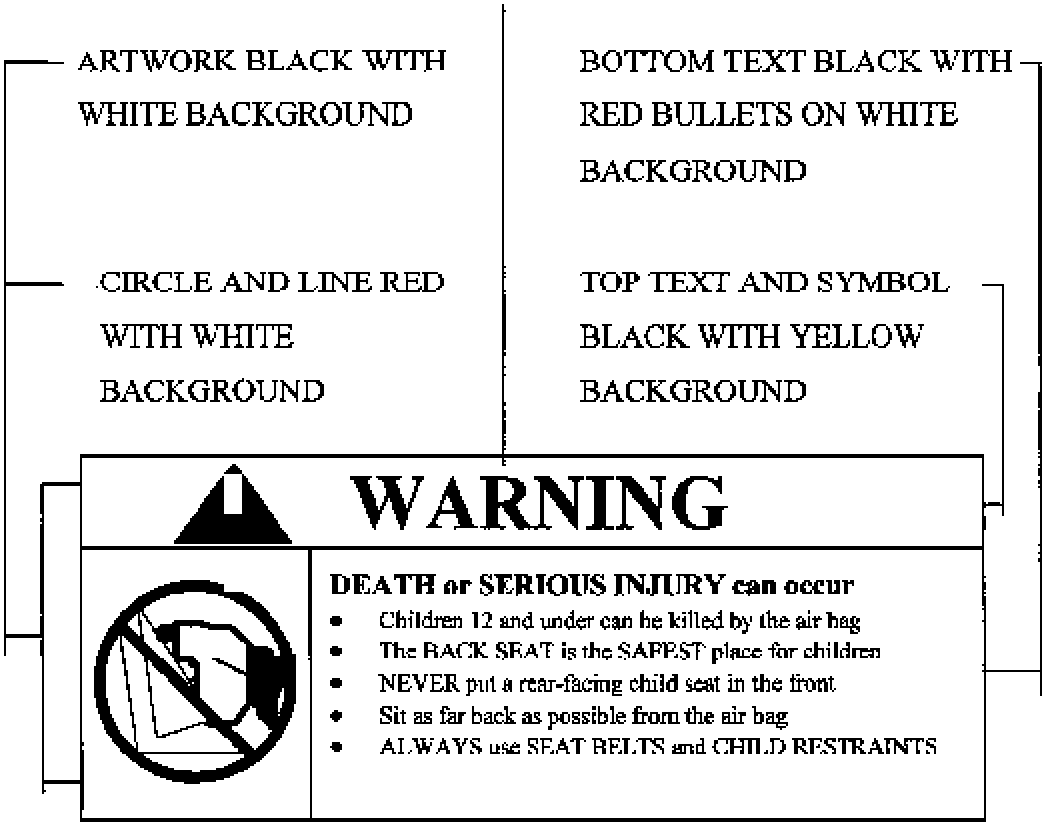
☒ N/A

Driver side	☐ Yes-Pass	☐ **No-Fail**

FMVSS 208 Air Bag Labels, Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK



ARTWORK BLACK WITH WHITE BACKGROUND

CIRCLE AND LINE RED WITH WHITE BACKGROUND

BOTTOM TEXT BLACK WITH RED BULLETS ON WHITE BACKGROUND

TOP TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

WARNING

DEATH or SERIOUS INJURY can occur

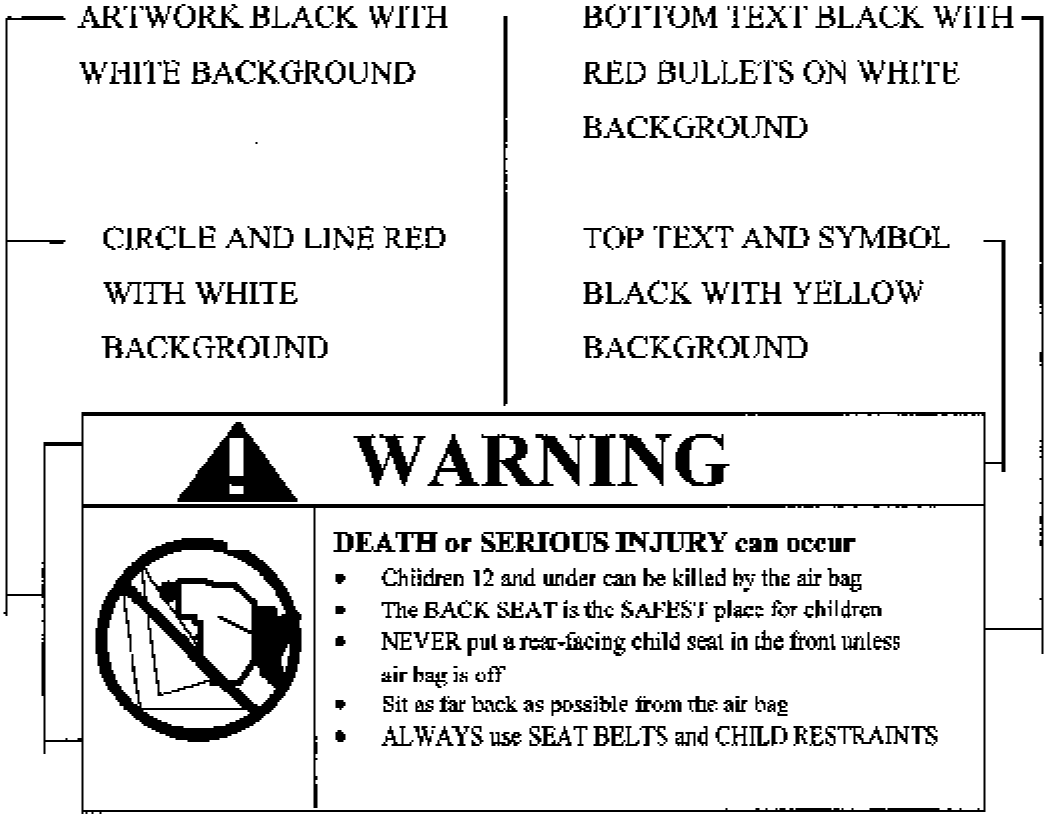
- Children 12 and under can be killed by the air bag
- The BACK SEAT is the SAFEST place for children
- NEVER put a rear-facing child seat in the front
- Sit as far back as possible from the air bag
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6a
(S4.5.1(b)(2))

FMVSS 208 Air Bag Labels, Cont'd.

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK


ARTWORK BLACK WITH WHITE BACKGROUND
BOTTOM TEXT BLACK WITH RED BULLETS ON WHITE BACKGROUND
CIRCLE AND LINE RED WITH WHITE BACKGROUND
TOP TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

WARNING

DEATH or SERIOUS INJURY can occur

- Children 12 and under can be killed by the air bag
- The BACK SEAT is the SAFEST place for children
- NEVER put a rear-facing child seat in the front unless air bag is off
- Sit as far back as possible from the air bag
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6b
(S4.5.1(b)(2))

4.3 Is the driver side label heading area yellow with the word "warning" and the alert symbol in black? (S4.5.1.(b)(2)(i))

	Driver side	☒ Yes-Pass	☐ **No-Fail**
	Passenger side	☒ Yes-Pass	☐ **No-Fail**

4.4 Is the message white with black text? (S4.5.1 (b)(2)(ii))

	Driver side	☒ Yes-Pass	☐ **No-Fail**
Passenger side	☐ No air bag	☒ Yes-Pass	☐ **No-Fail**

4.5 Is the message area at least 30 cm^2? (S4.5.1(b)(2)(ii))

Actual message area, driver side **32** cm^2

Actual message area, passenger side **32** cm^2

	Driver side	☒ Yes-Pass	☐ **No-Fail**
Passenger side	☐ No air bag	☒ Yes-Pass	☐ **No-Fail**

FMVSS 208 Air Bag Labels, Cont'd.

4.6 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii)) & (S4.5.1(b)(2)(iv))

For vehicles with driver side air bag ONLY ☐ N/A

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.7 Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii))

Actual diameter, driver side **31** mm

Actual diameter, passenger side **31** mm

For vehicles with driver side air bag ONLY ☐ N/A

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.8 Is the same side of the sun visor to which the sun visor label is affixed free of other information with the exception of an air bag maintenance label? (S4.5.1(b)(3)) and/or a rollover warning label specified in 49CFR Part 575 (S575.105)?

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

4.9 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label or the utility vehicle label?

Driver side ☒ Yes-Pass ☐ **No-Fail**

Passenger side ☐ No air bag ☒ Yes-Pass ☐ **No-Fail**

5. Air Bag Alert Label

5.1 Is the Sun Visor Warning Label visible when the sun visor is in the stowed position?

Driver ☒ Yes ☐ No

Passenger ☒ Yes ☐ No

If yes, go to 6

5.2 Does the label conform in content to the label shown in Figure 6c? (S4.5.1(c)(2)) ☐ Yes-Pass ☐ **No-Fail**

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN UP POSITION

Circle and Line Red with White Background

Artwork Black with White Background

Text Yellow with Black Background

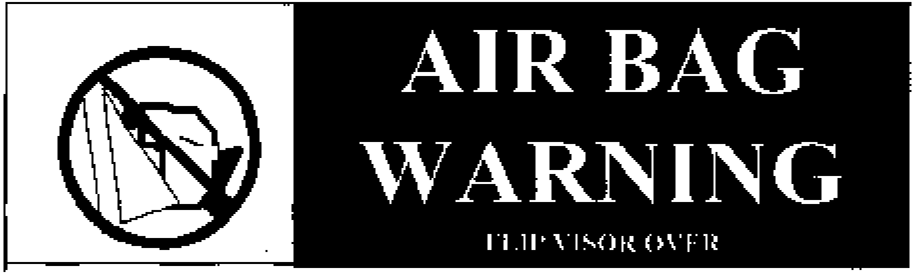


Figure 6c
(S4.5.1(c)(2))

5.3 Is the message area black with yellow text? (S4.5.1(c)(2)(i))

☐ Yes-Pass ☐ **No-Fail**

5.4 Is the message area at least 20 cm^2? (S4.5.1(c)(2)(i))

Actual message area **N/A** cm^2 ☐ Yes-Pass ☐ **No-Fail**

5.5 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2)(ii))

For vehicles with driver side air bag ONLY ☒ N/A

☐ Yes-Pass ☐ **No-Fail**

5.6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))

Actual diameter is **N/A** mm

For vehicles with driver side air bag ONLY ☒ N/A

☐ Yes-Pass ☐ **No-Fail**

6. Label On the Dash

6.1 Does the vehicle have a passenger air bag?

☒ Yes ☐ No

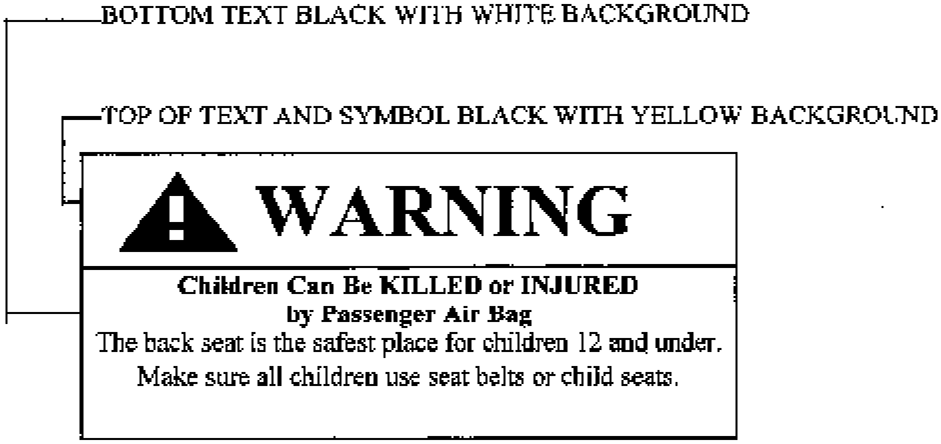
If no, this checklist is complete.

6.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e))

Not present on vehicle as delivered. ☐ Yes-Pass ☐ **No-Fail**

6.3 Does the label conform in content (**vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under."**) (S4.5.1(e)(iii)) to the label shown in Figure 7? (S4.5.1(e))

☐ Yes-Pass ☐ **No-Fail**



BOTTOM TEXT BLACK WITH WHITE BACKGROUND

TOP OF TEXT AND SYMBOL BLACK WITH YELLOW BACKGROUND

WARNING

Children Can Be KILLED or INJURED
by Passenger Air Bag
The back seat is the safest place for children 12 and under.
Make sure all children use seat belts or child seats.

Figure 7
(S4.5.1(e))

FMVSS 208 Air Bag Labels, Cont'd.

6.4 Is the heading area yellow with the word "warning" and the alert symbol in black?
(S4.5.1(e)(i)) ☐ Yes-Pass ☐ **No-Fail**

6.5 Is the message white with black text? (S4.5.1(e)(ii))
☐ Yes-Pass ☐ **No-Fail**

6.6 Is the message area at least 30 cm^2? (S4.5.1(e)(ii))
Actual message area **N/A** cm^2 ☐ Yes-Pass ☐ **No-Fail**

FMVSS 208 Rear Outboard Seating Position Seat Belts

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/10/03

Do all rear outboard seating positions have type 2 seat belts?

☐ Yes; ☐ No; ☒ N/A (No Back Seat)

If No, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a type 2 belt was not installed.

FMVSS 208 Lap Belt Lockability

Passenger cars, trucks, buses, and multipurpose passenger
vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic retractors. (S7.1.1.5(c))

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/07/2003

Designated Seating Position: Right Front

☒1. Record test seat position: Mid
(S7.1.1.5(c)(1)) (Any position is acceptable.)

☒2. Buckle the seat belt. (S7.1.1.5(c)(1))

☒3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))

☒4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part to the vehicle? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing? (S7.1.1.5(a)) ☒ Yes-Pass ☐ **No-Fail**

☒6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
If yes, go to 6.1. If no, go to 7. ☒ Yes ☐ No

6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b)) ☒ Yes-Pass ☐ **No-Fail**

FMVSS 208 Lap Belt Lockability, Cont'd.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/07/2003

Designated Seating Position: Right Front

☒7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

☒8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

☒9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))

☒10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2)) Measured distance between A and B **50.9** inches.

☒11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))

☒12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4)) Measured force application angle **12** degrees. (Spec. 5~15 degrees)

☒13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B **21.3** inches.

Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck

NHTSA No.: C30201 Technician: Ronald D. Stoner Date: 01/07/2003

Designated Seating Position: Right Front

☒14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate **10** lbs/sec (spec. 10 ~50 lb/sec)

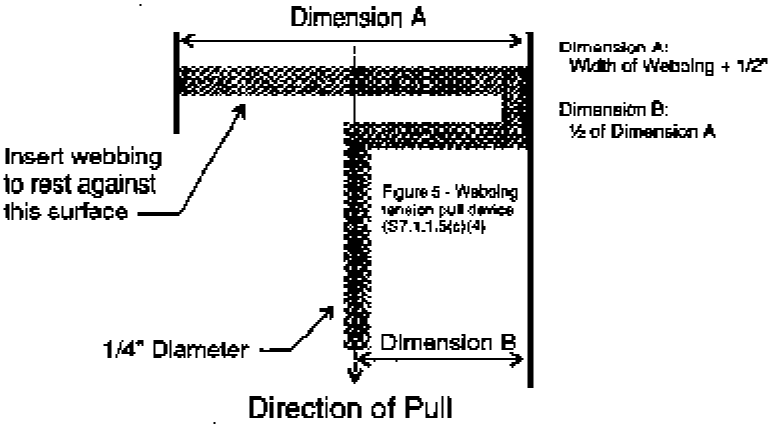
The measured distance between A and B is **21.7** inches (S7.1.1.5(c)(6))

☒15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5 (c)(7))

14-13= **0.4** inches ☒ Yes-Pass ☐ **No-Fail**

☒16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more? (S7.1.1.5(c)(8))

10-14= **29.2** inches. ☒ Yes-Pass ☐ **No-Fail**


Dimension A
Dimension A: Width of Webbing + 1/2"
Dimension B: ½ of Dimension A
Insert webbing to rest against this surface
Figure 5 - Webbing tension pull device (S7.1.1.5(c)(4)
1/4" Diameter
Dimension B
Direction of Pull

FMVSS 208 Seat Belt Comfort And Convenience Test Summary

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Left Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Does the vehicle incorporate a webbing tension-relieving device?

☐ Yes-go to latchplate access
☒ No-continue with this check sheet

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

☒ Check
☐ N/A

3. If separately adjustable in a vertical direction, the seats are at the lowest position.

☐ Check
☒ N/A

4. Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

☐ Check
☒ N/A

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

☒ Check
☐ N/A

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

6. Place each adjustable head restraint in its highest adjustment position.

☐ Check
☒ N/A

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

☐ Check
☒ N/A

8. Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure.

☒ Check

9. Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds. Contact force is 0.4 pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

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* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

FMVSS 208 Seat Belt Comfort And Convenience Test Summary

Belt Contact Force (S7.4.3)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Right Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Does the vehicle incorporate a webbing tension-relieving device?

   ☐ Yes-go to latchplate access
   ☒ No-continue with this check sheet

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)

   ☒ Check
   ☐ N/A

3. If separately adjustable in a vertical direction, the seats are at the lowest position.

   ☐ Check
   ☒ N/A

4. Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.

   ☐ Check
   ☒ N/A

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.

   ☒ Check
   ☐ N/A

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Belt Contact Force (S7.4.3)

6. Place each adjustable head restraint in its highest adjustment position.

☐ Check
☒ N/A

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)

☐ Check
☒ N/A

8. Position the test dummy according to the dummy position placement instructions in Appendix B of the Laboratory Test Procedure.

☒ Check

9. Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds. Contact force is 0.4 pounds.

☒ 0.0 to 0.7 pounds - Pass
☐ **greater than 0.7 pounds - FAIL***

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* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.
Latchplate Access (S7.4.4)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Left Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Position the seat in its forward most adjustment position. ☒ Check

2. Position the test dummy using the procedures in Appendix B of the Laboratory Test Procedure. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.) ☒ Check

3. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant. ☒ Check

4. Attach the inboard and outboard reach string following the instructions on Figure 1C of the Laboratory Test Procedure. ☒ Check

5. Place the latch plate in the stowed position. ☒ Check

6. Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms. Is the latchplate within the reach envelope?

   ☒ Yes-Pass; ☐ **No-Fail**

7. Using the clearance test block, specified in Figure 2C of the Laboratory Test Procedure, determine if there is sufficient clearance between the vehicle seat and the side of vehicle to allow the test block to move unhindered to the latchplate or buckle.

   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Latchplate Access (S7.4.4)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Right Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Position the seat in its forward most adjustment position. ☒ Check

2. Position the test dummy using the procedures in Appendix B of the Laboratory Test Procedure. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.) ☒ Check

3. Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant. ☒ Check

4. Attach the inboard and outboard reach string following the instructions on Figure 1C of the Laboratory Test Procedure. ☒ Check

5. Place the latch plate in the stowed position. ☒ Check

6. Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms. Is the latchplate within the reach envelope?

   ☒ Yes-Pass; ☐ **No-Fail**

7. Using the clearance test block, specified in Figure 2C of the Laboratory Test Procedure, determine if there is sufficient clearance between the vehicle seat and the side of vehicle to allow the test block to move unhindered to the latchplate or buckle.

   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Left Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Is the vehicle a passenger car or walk-in van-type vehicle? ☐ Yes ☒ No

   If yes, go to seat belt guides and hardware.

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2) ☒ Check

3. If separately adjustable in a vertical direction, the seats are at the lowest position. ☒ Check

4. Place any adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer. ☒ Check

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR. ☒ Check

6. Place each adjustable head restraint in its highest adjustment position. ☒ Check

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3) ☒ Check

8. Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B of the Laboratory Test Procedure. ☒ Check

9. Restrain the dummies using the belt systems for the position being tested. ☒ Check

10. Stow outboard armrests that are capable of being stowed. ☒ Check

11. Check the statement that applies to this test vehicle:

    (A) The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latchplate is released. ☒ Pass

    (B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latchplate is released. ☒ Pass

    (C) Neither A or B apply. ☐ **Fail**

12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

    ☒ Yes-Pass; ☐ **No-Fail**

13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated? ☒ N/A

    ☐ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Right Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

1. Is the vehicle a passenger car or walk-in van-type vehicle? ☐ Yes ☒ No

   If yes, go to seat belt guides and hardware.

2. Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2) ☒ Check

3. If separately adjustable in a vertical direction, the seats are at the lowest position. ☒ Check

4. Place any adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer. ☒ Check

5. Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR. ☒ Check

6. Place each adjustable head restraint in its highest adjustment position. ☒ Check

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Retraction (S7.4.5)

7. Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3) ☒ Check

8. Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B. ☒ Check

9. Restrain the dummies using the belt systems for the position being tested. ☒ Check

10. Stow outboard armrests that are capable of being stowed. ☒ Check

11. Check the statement that applies to this test vehicle:

    (A) The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latchplate is released. ☒ Pass

    (B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latchplate is released. ☒ Pass

    (C) Neither A or B apply. ☐ **Fail**

12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

    ☒ Yes-Pass; ☐ **No-Fail**

13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated? ☒ N/A

    ☐ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Left Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?
   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

(A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

☒ Check

(B) The seat is moved to any position to which it is designed to be adjusted.

☒ Check

(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☒ Check

☒ Yes-Pass; ☐ **No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐ **No-Fail**

N/A, no armrest

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Right Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
   ☒ Yes: go to 2.
   ☐ No: this form is complete.

2. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
   ☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?
   ☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

   (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.

   ☒ Check

   (B) The seat is moved to any position to which it is designed to be adjusted.

   ☒ Check

   (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☒ Check

   ☒ Yes-Pass; ☐ **No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐ **No-Fail**

   N/A, no armrest

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

Test Vehicle NHTSA No.: C30201
Vehicle Model Year/Make/Model/Body Style: 2003/Ford/F150/Truck
Designated Seating Position Tested: Center Front
Date of Comfort and Convenience Check: 01/07/2003
Technician Performing Check: Ronald D. Stoner
GVWR: 6050 pounds

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b)).

B. Seats which are removable.

C. Seats that are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, determine the following:

1. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?

☒ Yes: go to 2.
☐ No: this form is complete.

3. Does one of the following three parts, the seat belt latchplate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?

☒ Yes-Pass; ☐ **No-Fail**

3. Are the remaining two seat belt parts accessible under normal conditions?

☒ Yes-Pass; ☐ **No-Fail**

FMVSS 208 Seat Belt Comfort And Convenience Test Summary, Cont'd.

Seat Belt Guides And Hardware (S7.4.6)

4. The buckle and latchplate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:

   (B) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.
   ☒ Check

   (B) The seat is moved to any position to which it is designed to be adjusted.
   ☒ Check

   (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. ☒ Check

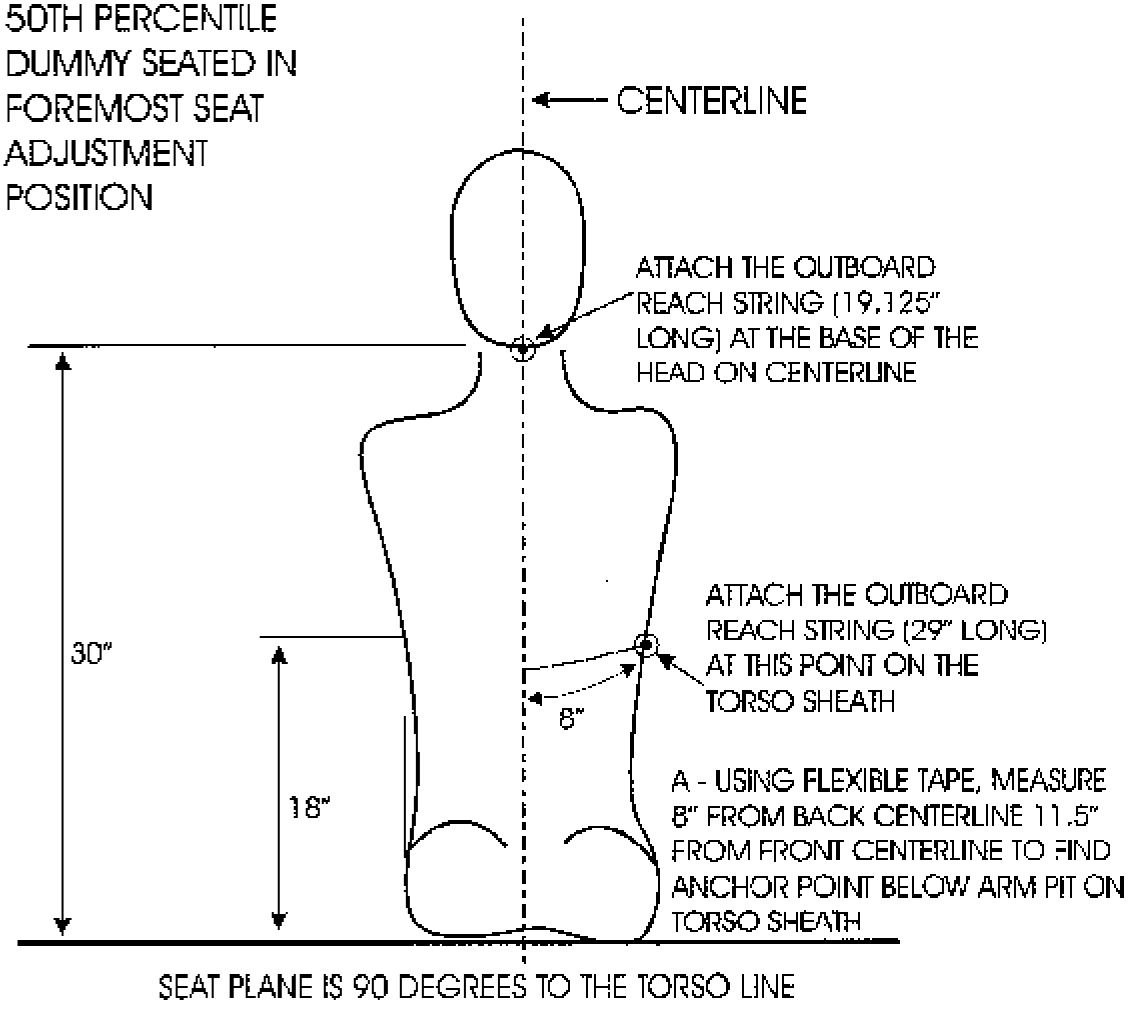
   ☒ Yes-Pass; ☐ **No-Fail**

5. Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)? ☐ Yes-Pass; ☐ **No-Fail**

N/A, no armrest

LOCATION OF ANCHORING POINTS FOR LATCHPLATE REACH LIMITING CHAINS OR STRINGS TO TEST FOR LATCHPLATE ACCESSIBILITY

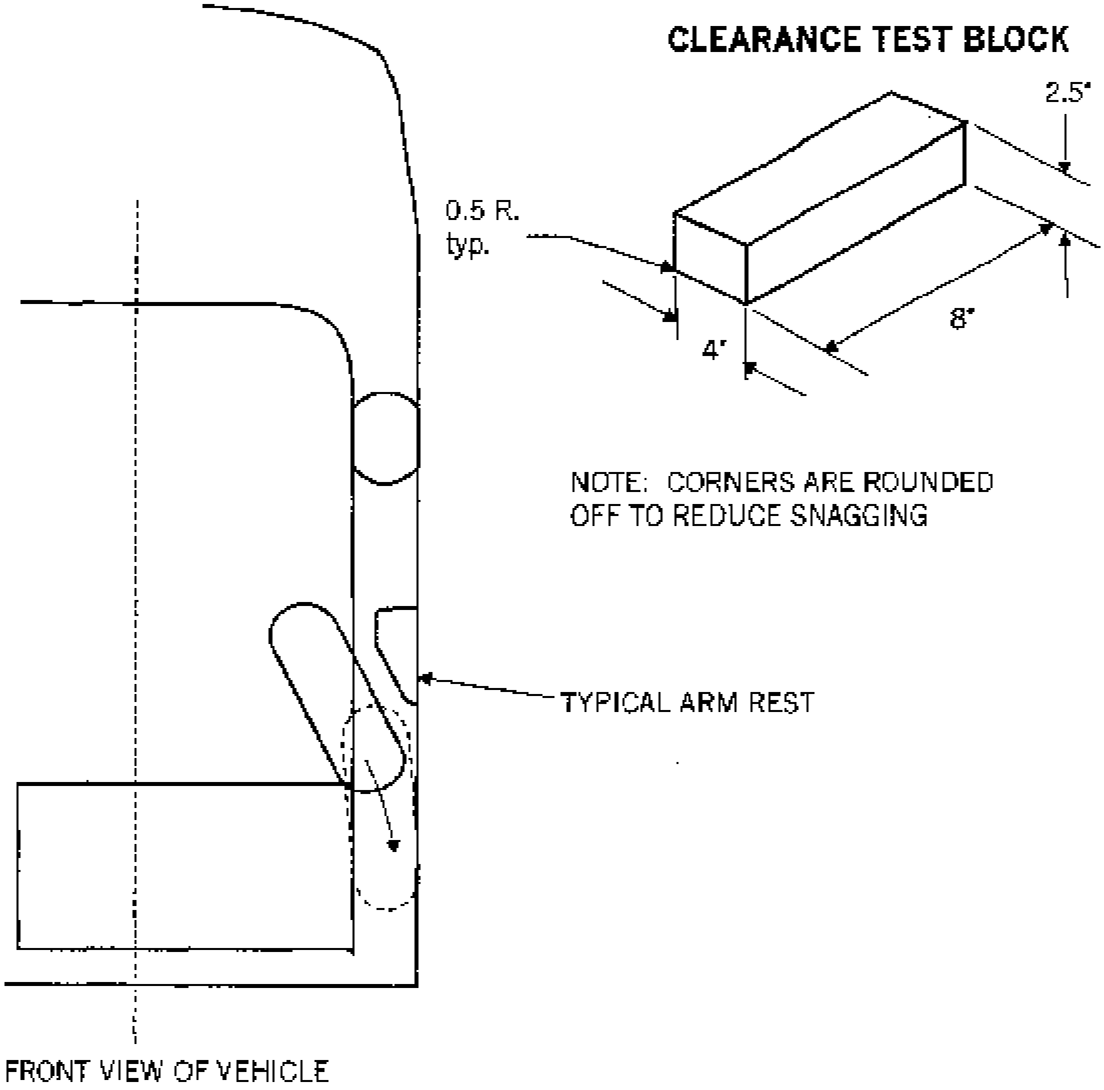
PART 572E DUMMY


50TH PERCENTILE DUMMY SEATED IN FOREMOST SEAT ADJUSTMENT POSITION
CENTERLINE
ATTACH THE OUTBOARD REACH STRING (19.125" LONG) AT THE BASE OF THE HEAD ON CENTERLINE
ATTACH THE OUTBOARD REACH STRING (29" LONG) AT THIS POINT ON THE TORSO SHEATH
30"
18"
8"
A - USING FLEXIBLE TAPE, MEASURE 8" FROM BACK CENTERLINE 11.5" FROM FRONT CENTERLINE TO FIND ANCHOR POINT BELOW ARM PIT ON TORSO SHEATH
SEAT PLANE IS 90 DEGREES TO THE TORSO LINE

REAR VIEW

Laboratory Test Procedure Figure 1C

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



Laboratory Test Procedure Figure 2C

Appendix A

Photographs

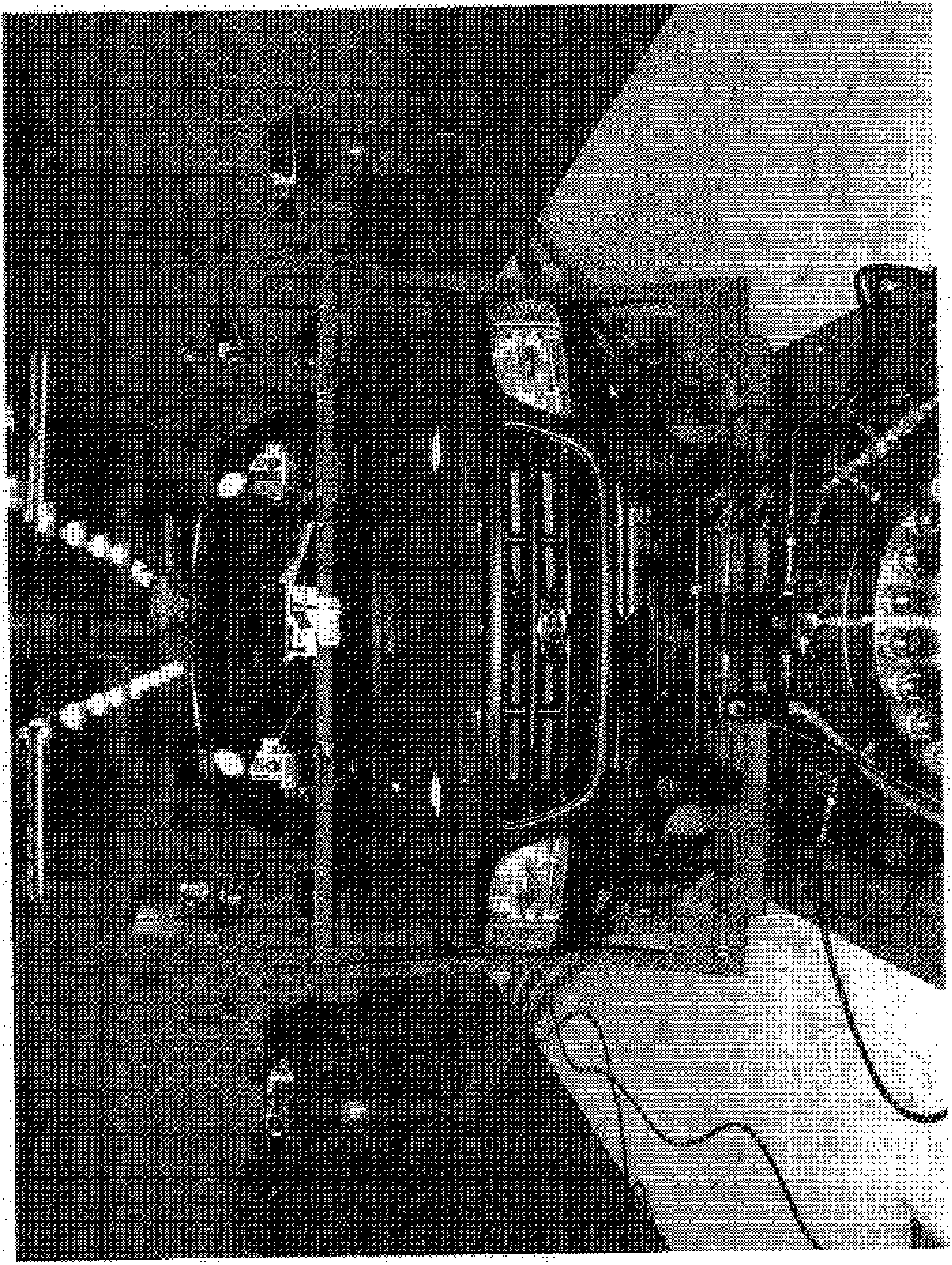


Figure A-1. Pre-Test Front View of Test Vehicle Mounted to Sled

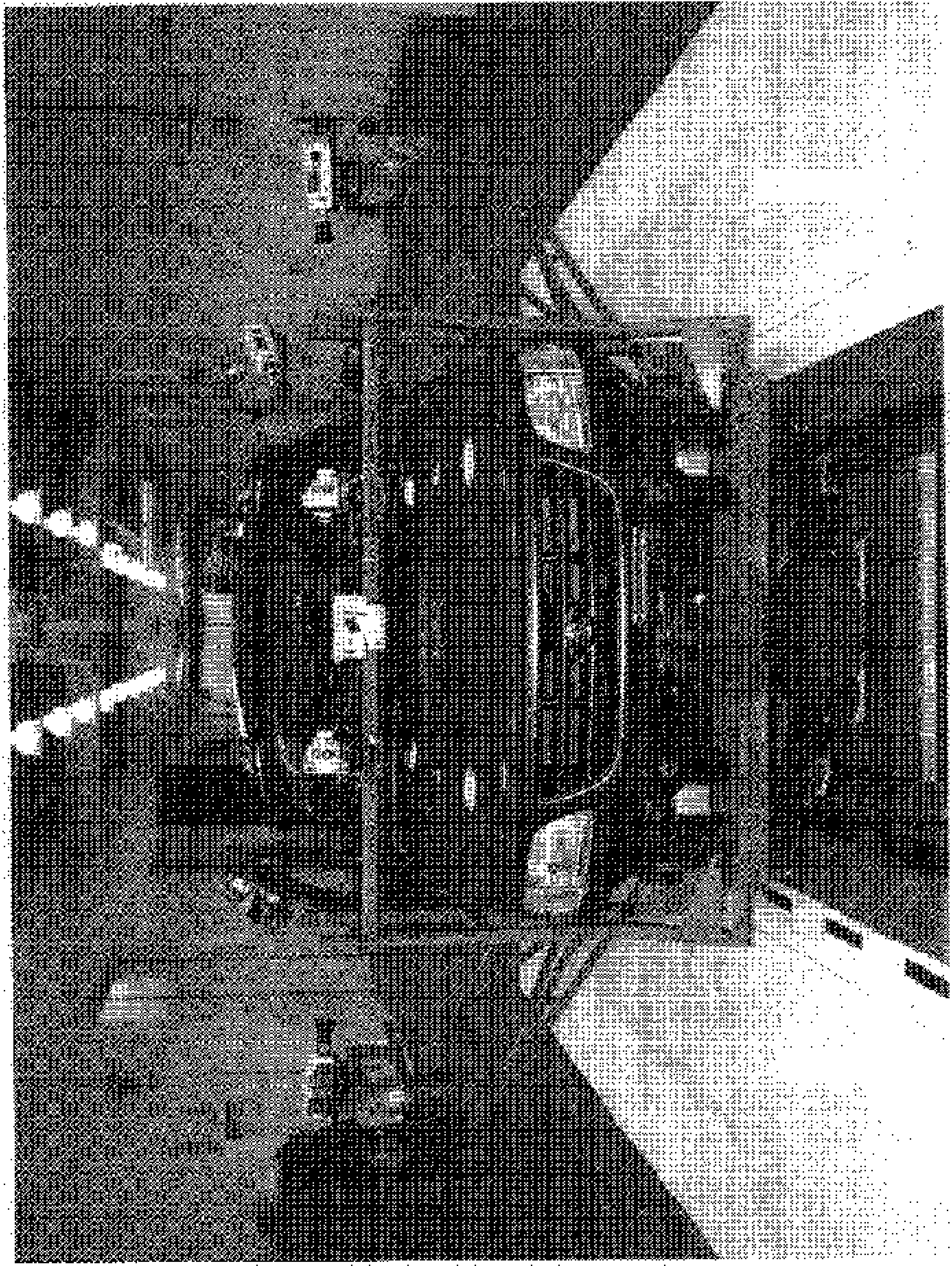


Figure A-2. Post-Test Front View of Test Vehicle Mounted to Sled

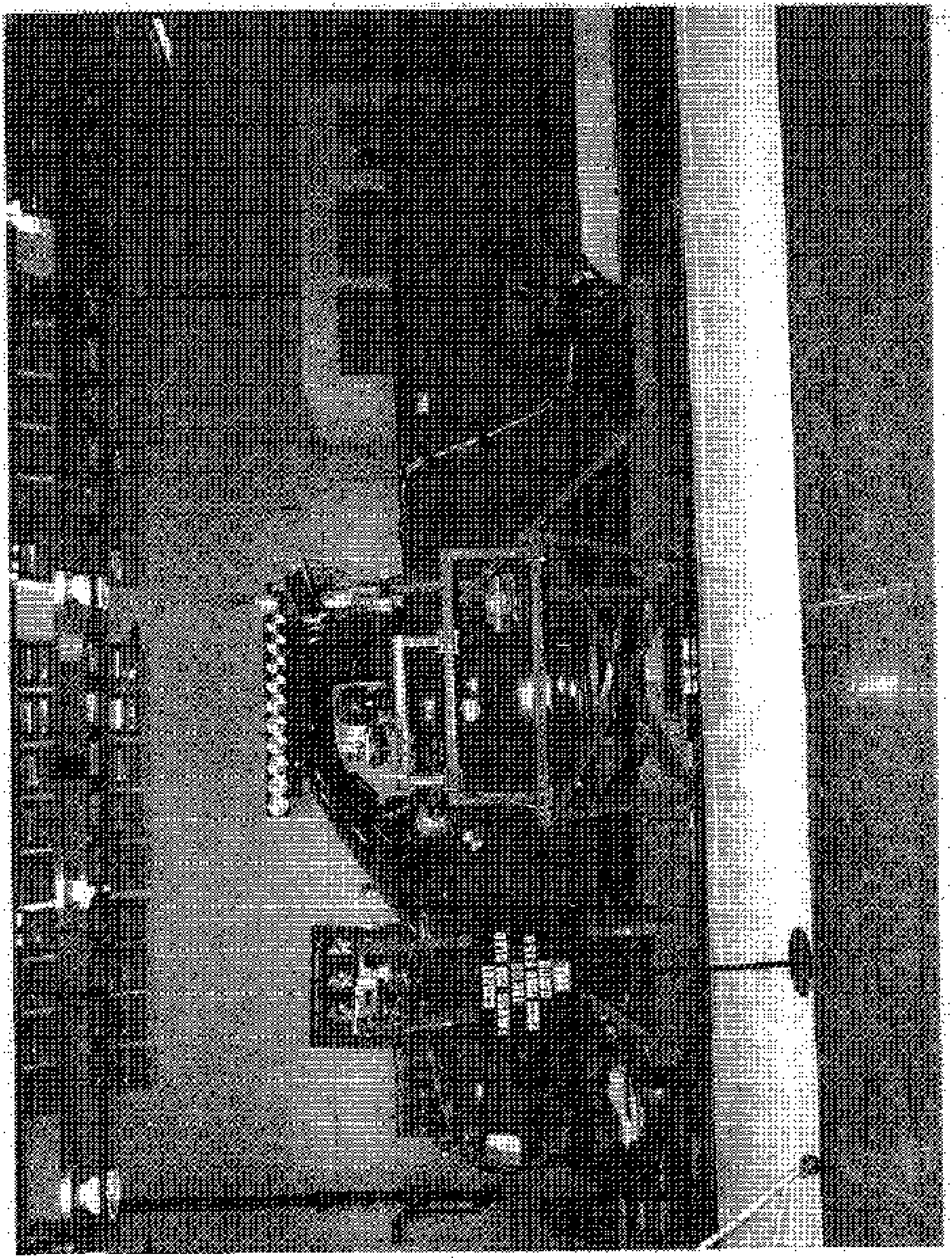


Figure A-3. Pre-Test Left Side View of Test Vehicle Mounted to Sled

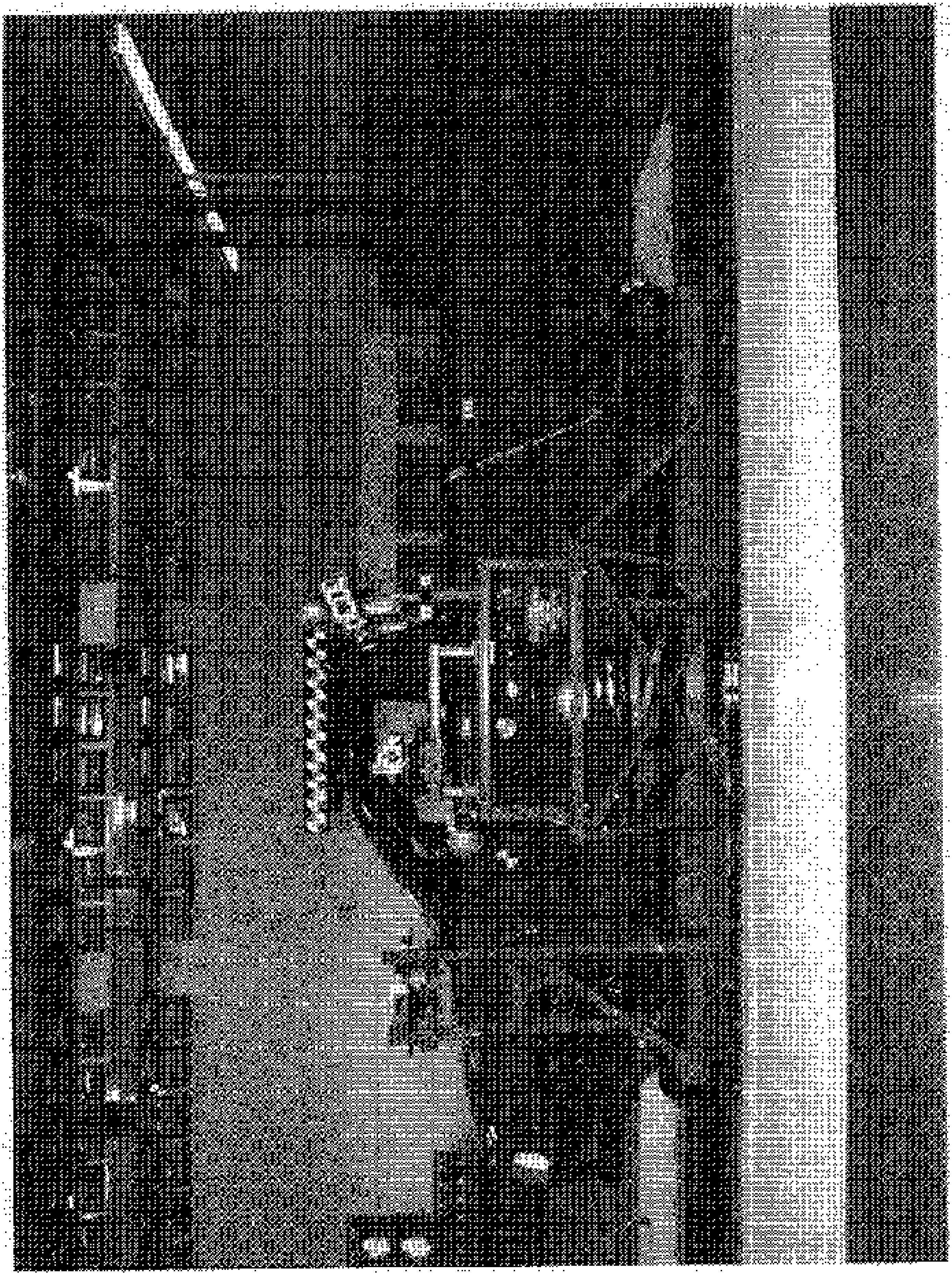


Figure A-4. Post-Test Left Side View of Test Vehicle Mounted to Sled

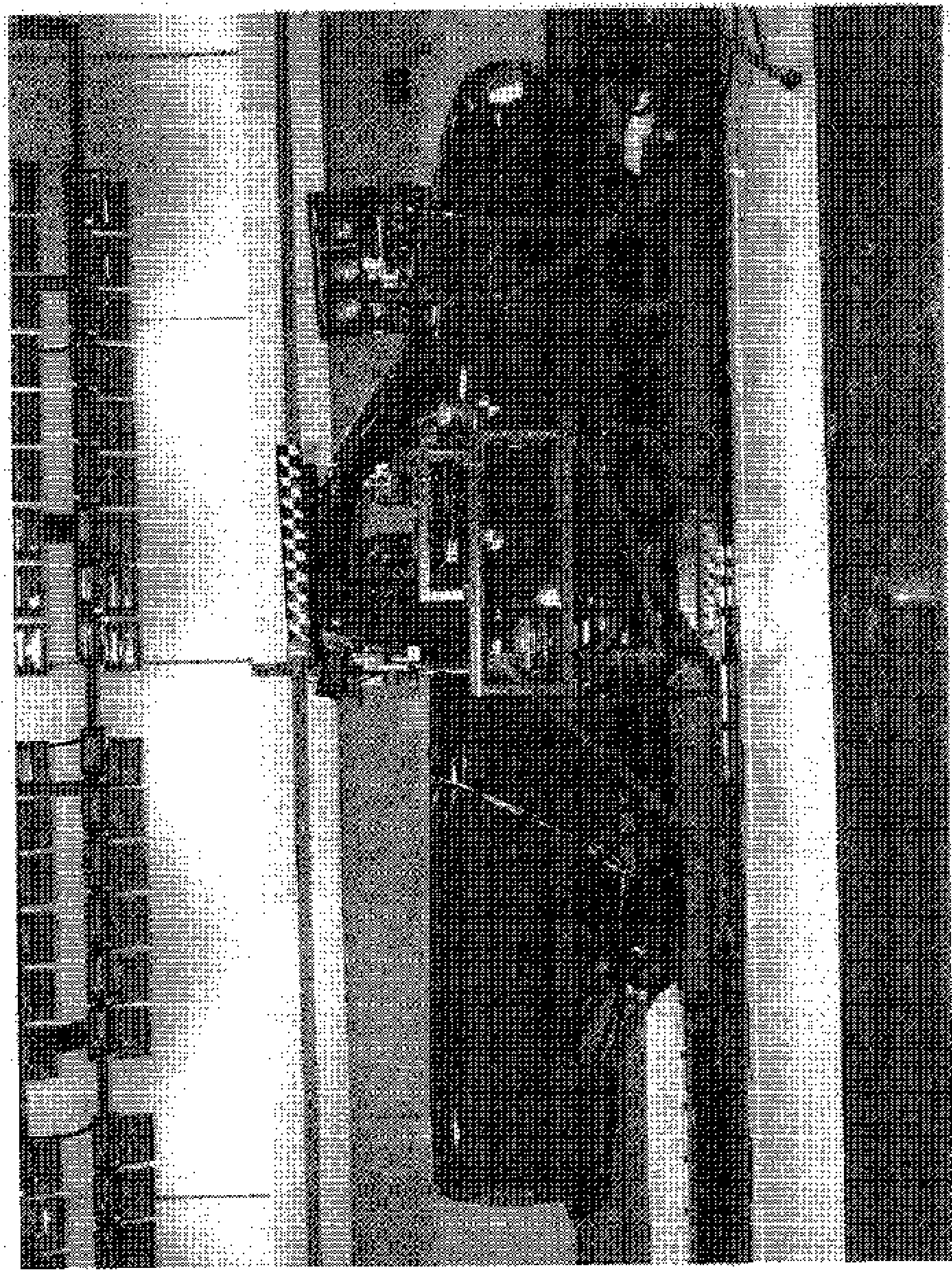


Figure A-5. Pre-Test Right Side View of Test Vehicle Mounted to Sled

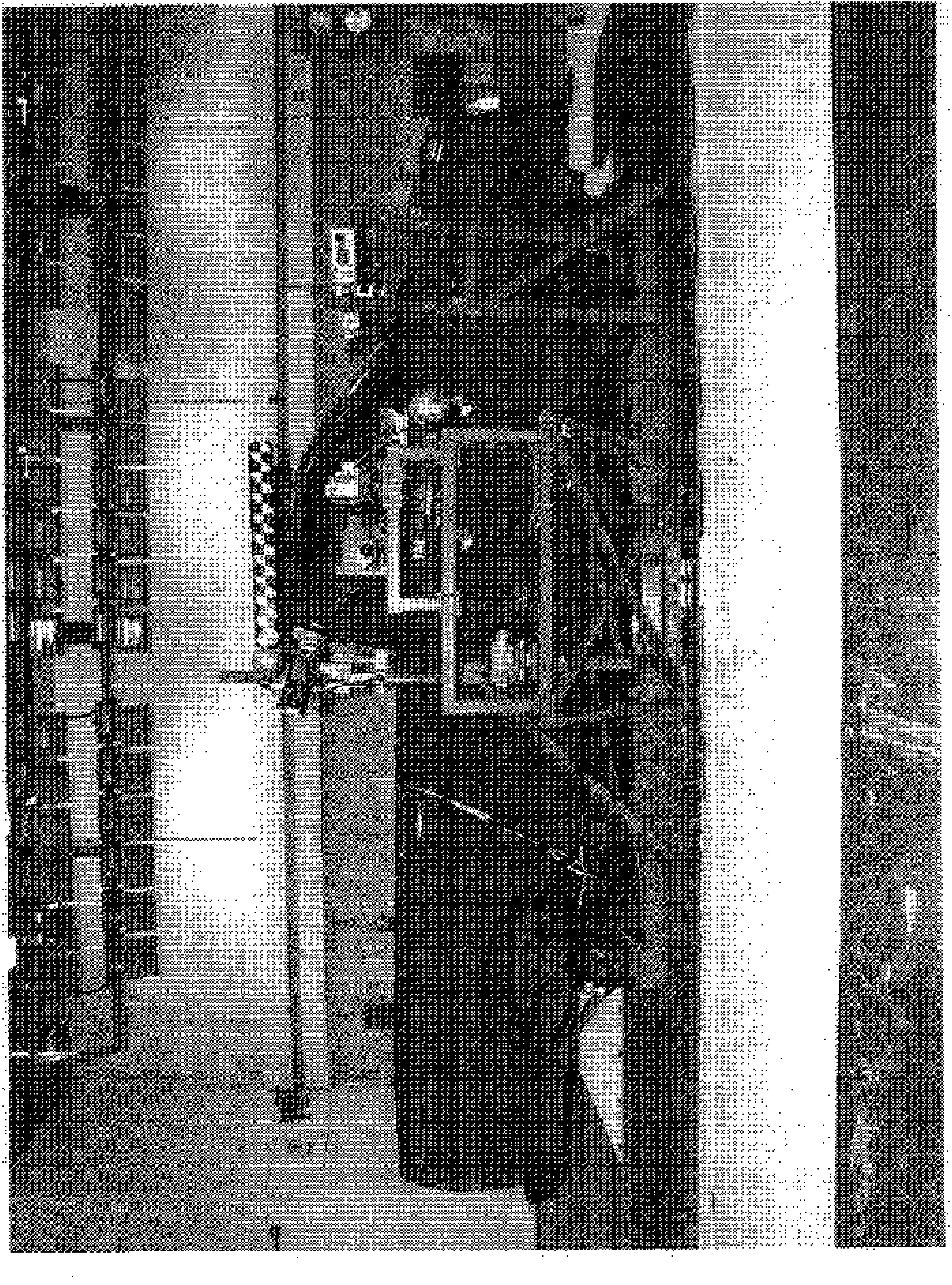


Figure A-6. Post-Test Right Side View of Test Vehicle Mounted to Sled

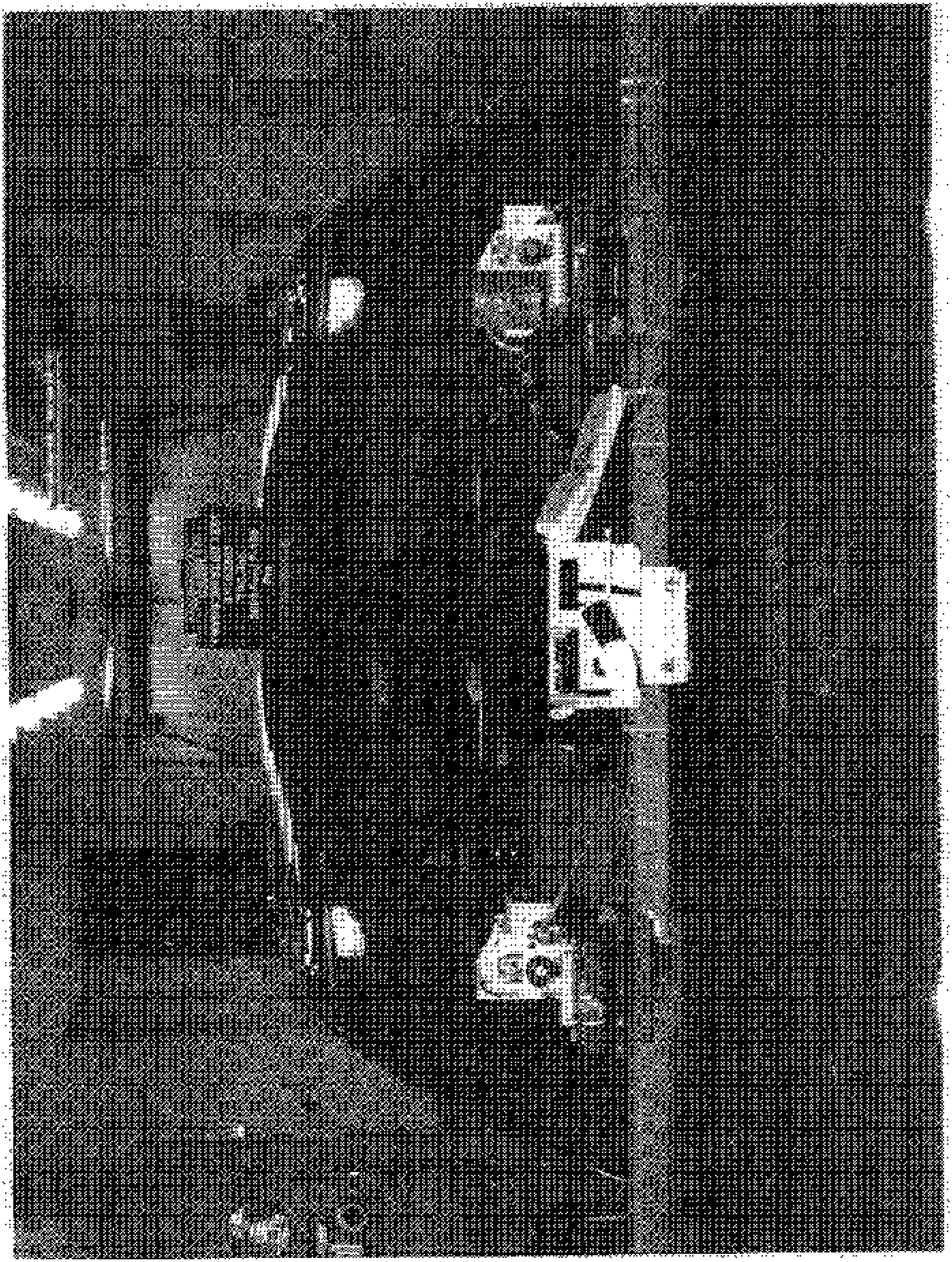


Figure A-7. Pre-Test Windshield View

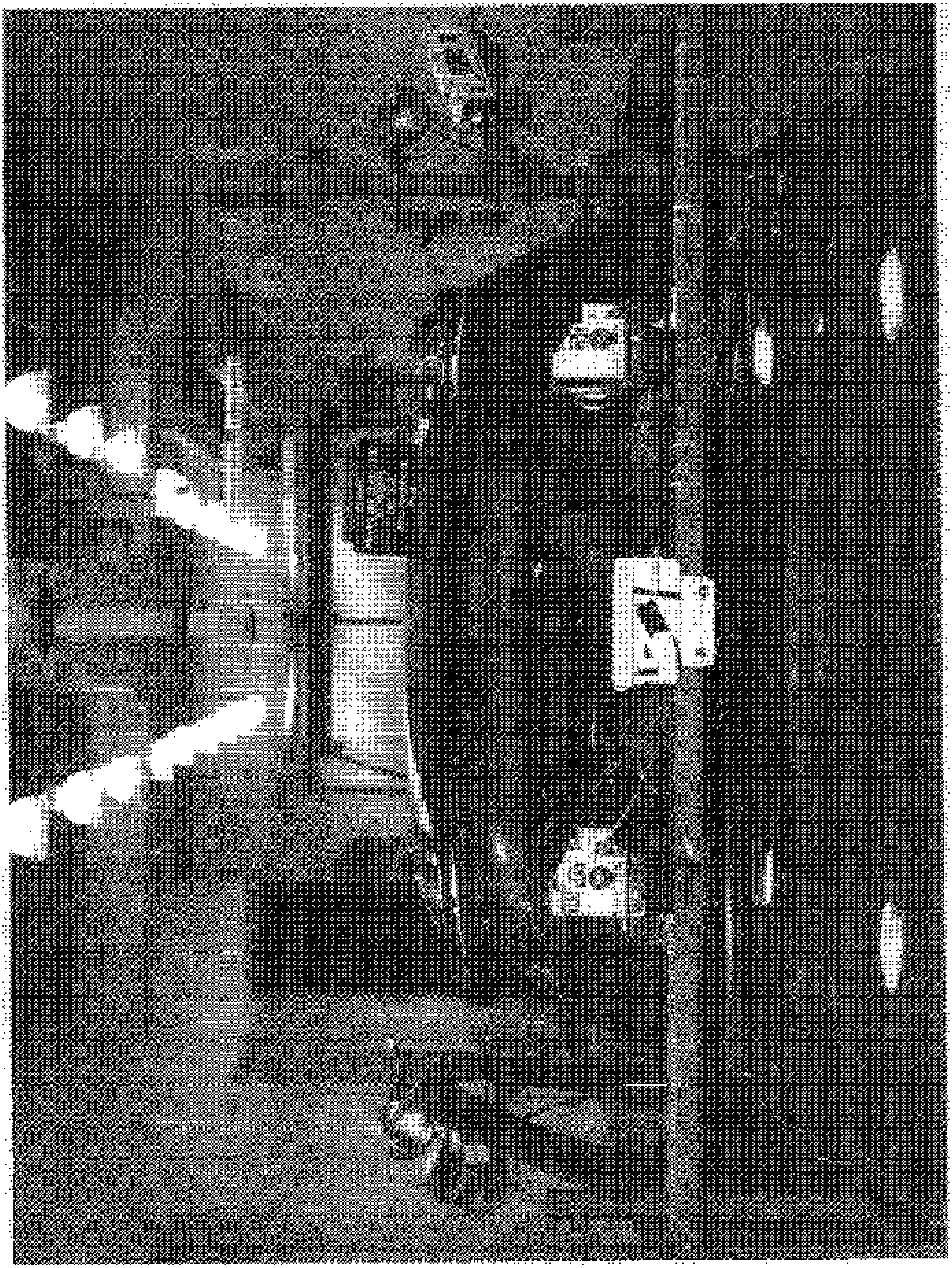


Figure A-8. Post-Test Windshield View

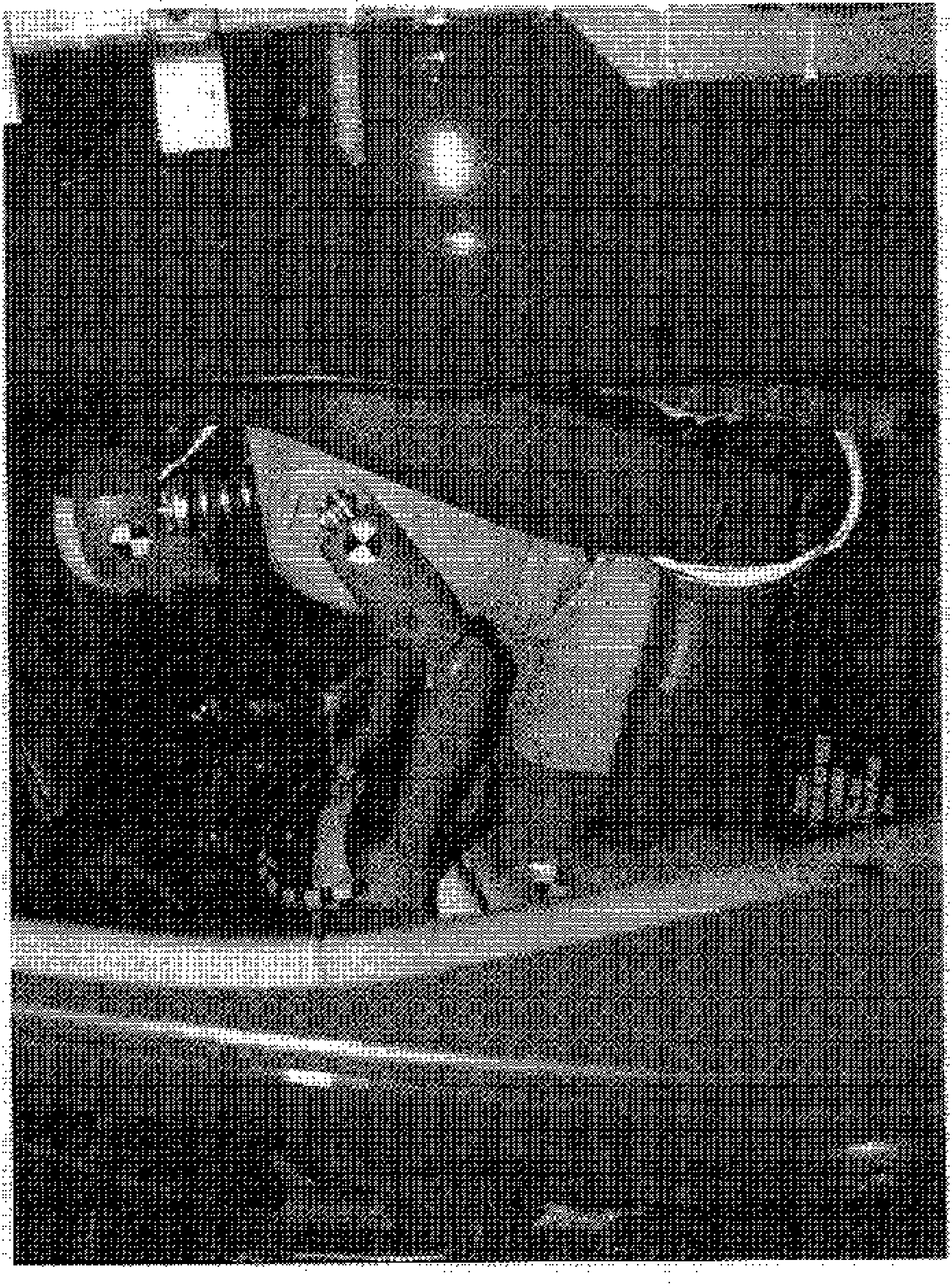


Figure A-9. Pre-Test Driver Dummy Position View with Door Open - View 1

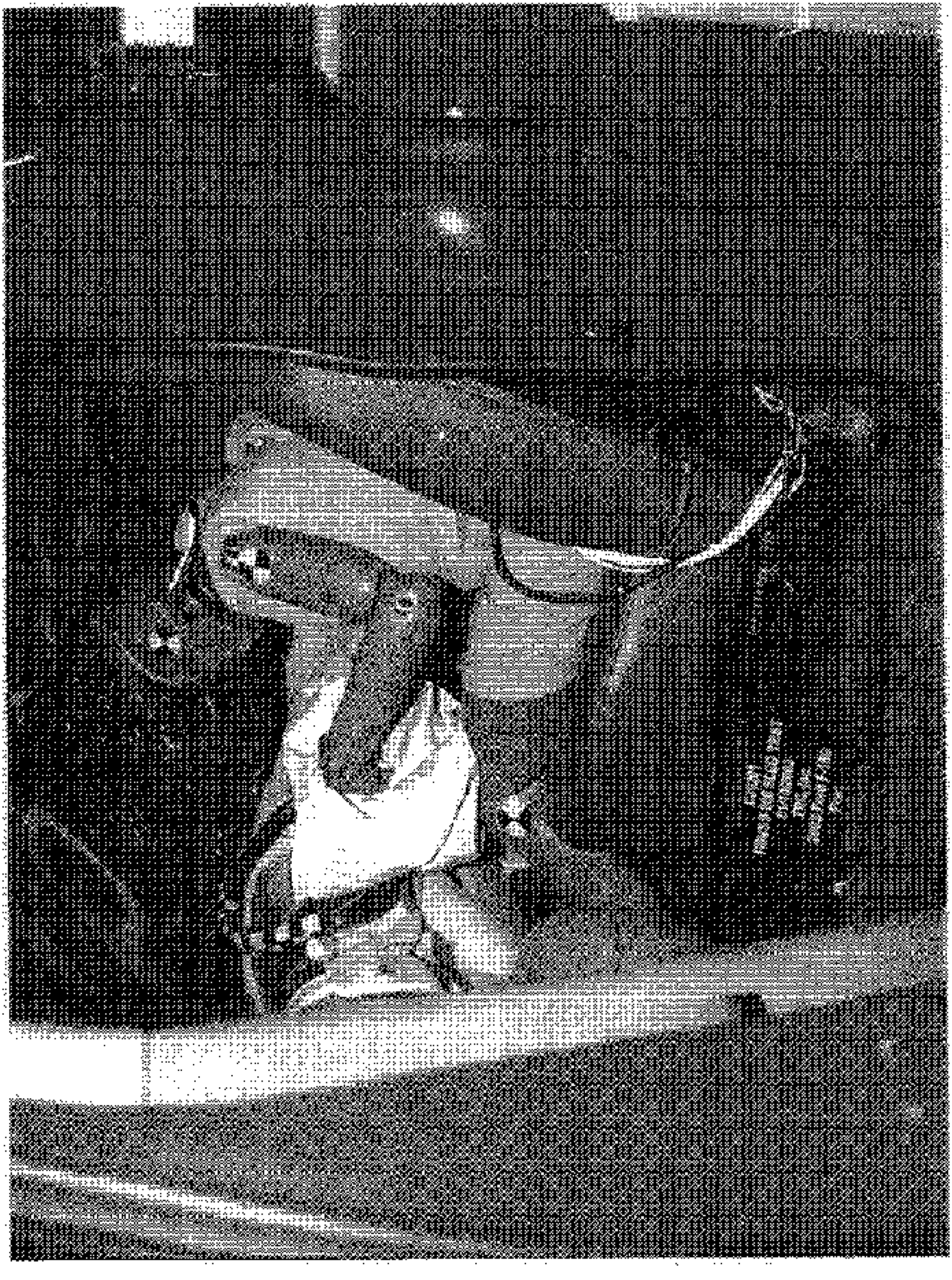


Figure A-10. Post-Test Driver Dummy Position View with Door Open - View 1

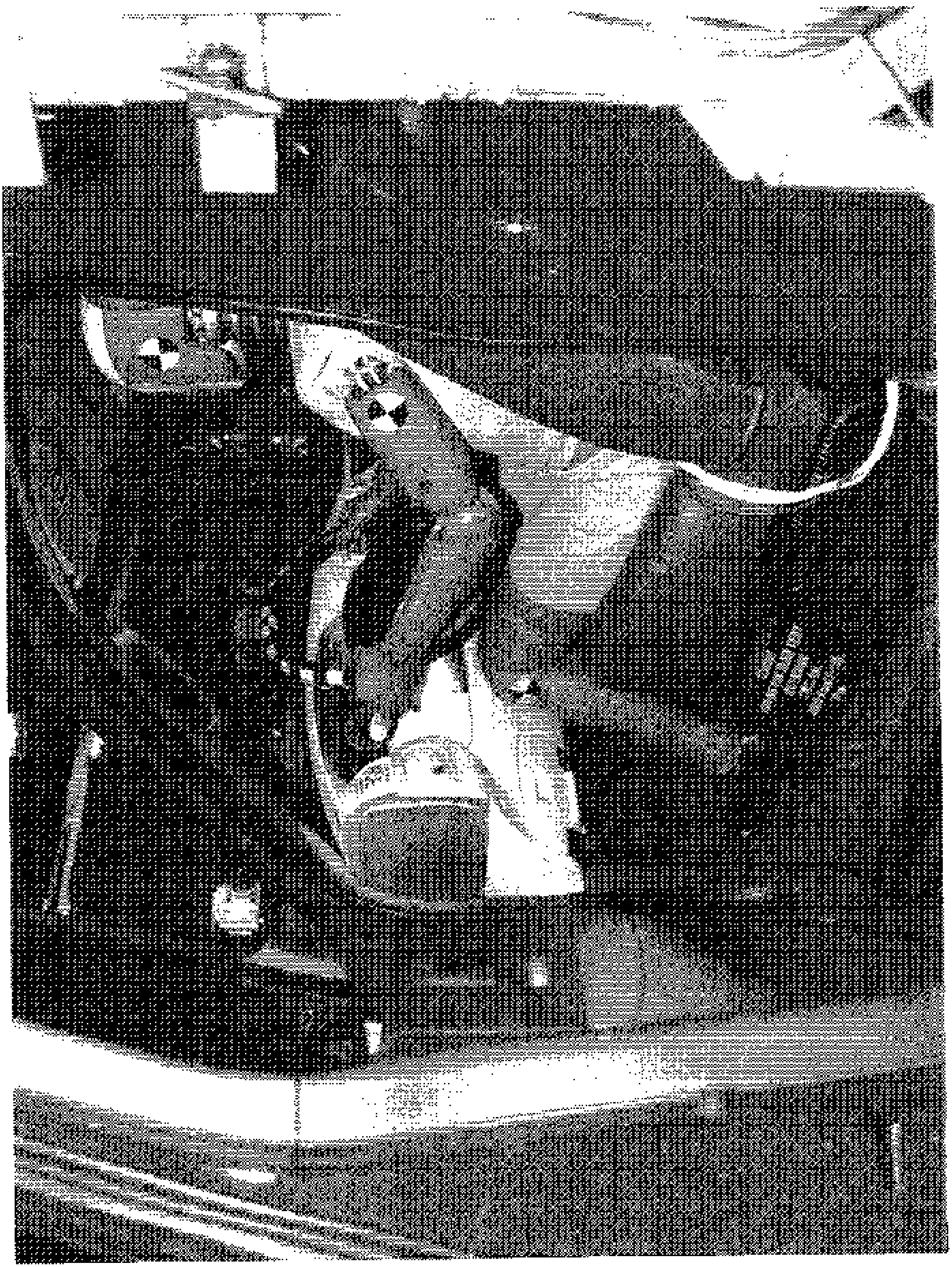


Figure A-11. Pre-Test Driver Dummy Position View with Door Open - View 2

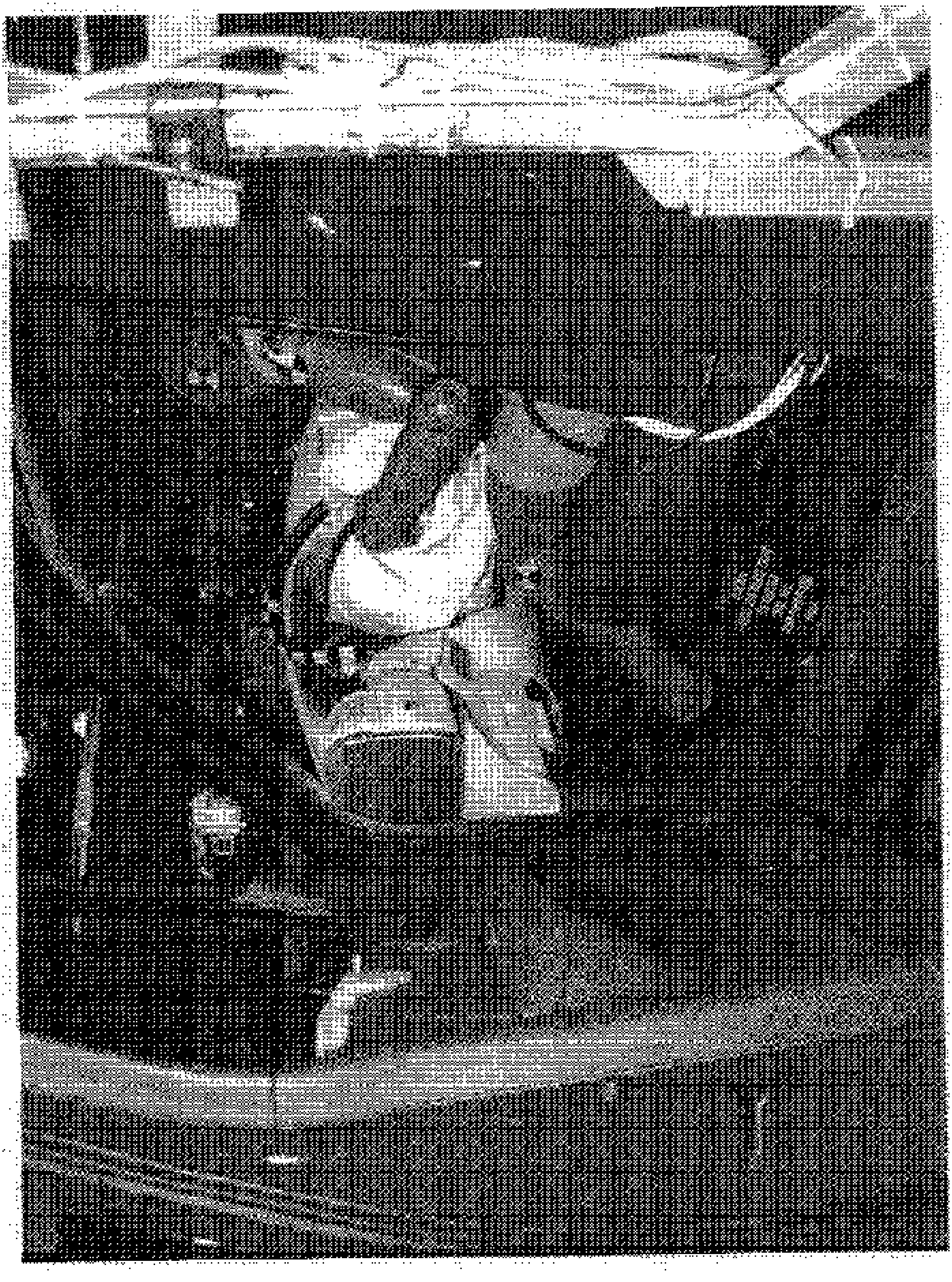


Figure A-12. Post-Test Driver Dummy Position View with Door Open - View 2

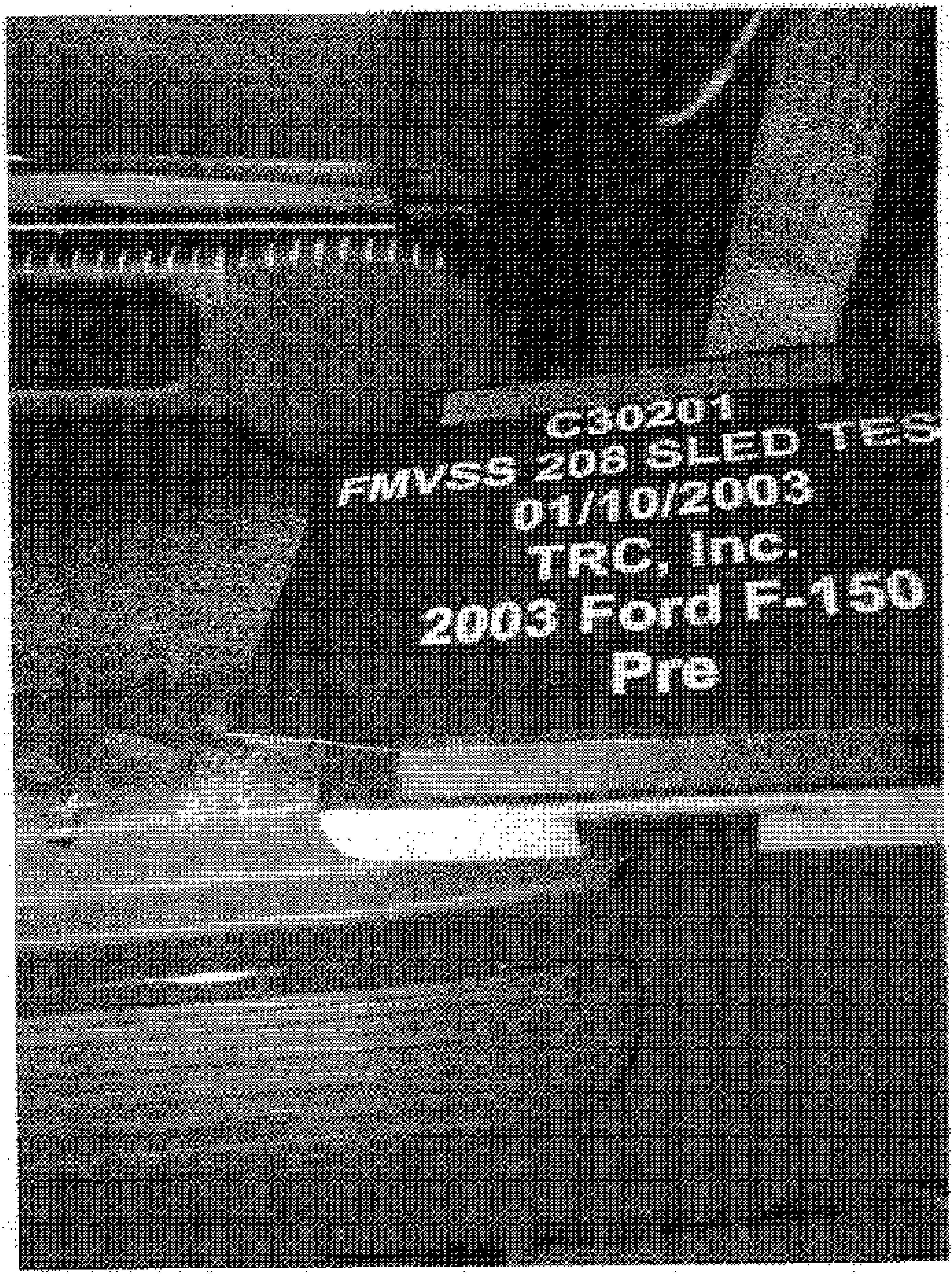


Figure A-13. Pre-Test Driver Seat Track Position View

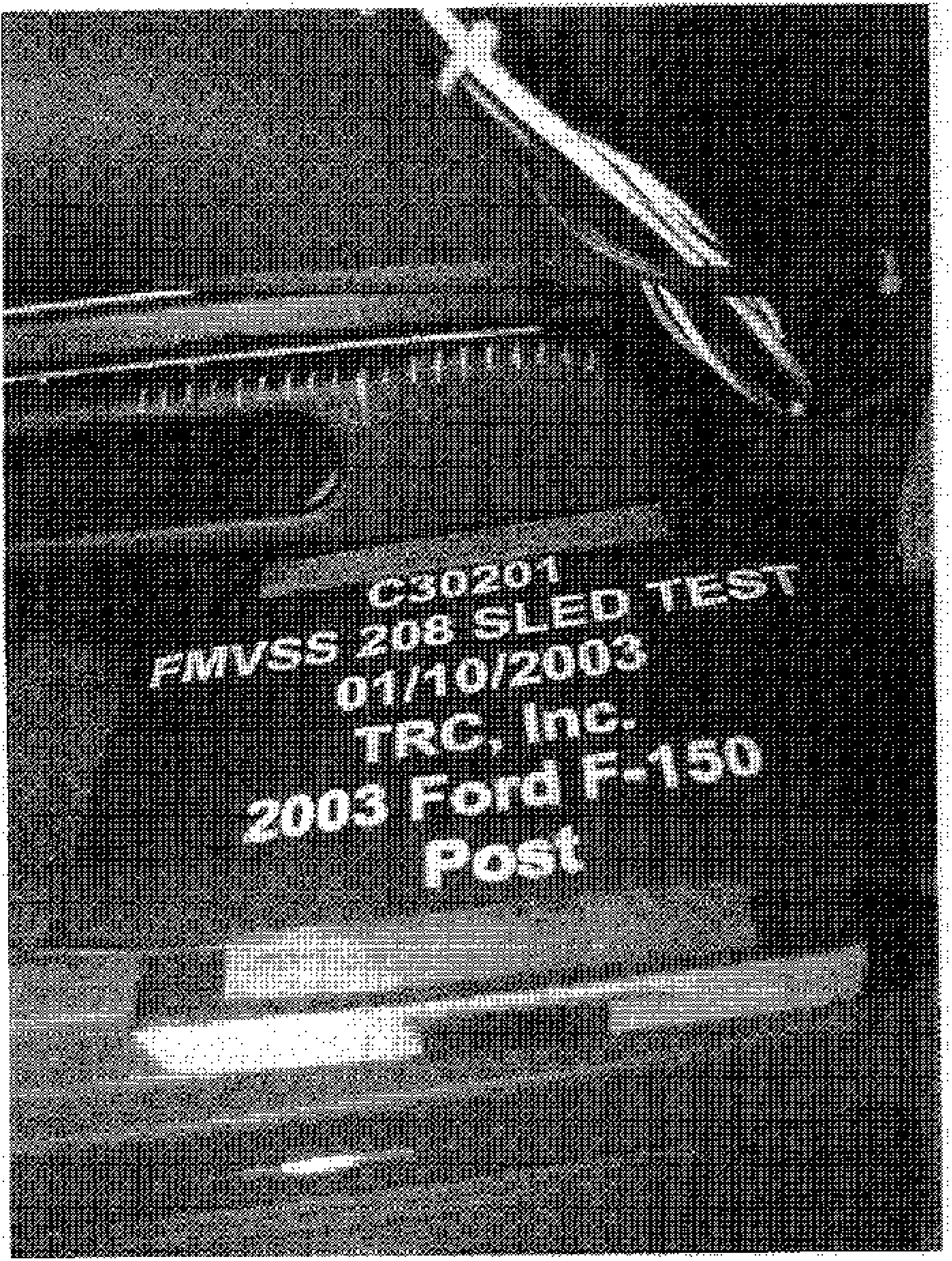


Figure A-14. Post-Test Driver Seat Track Position View

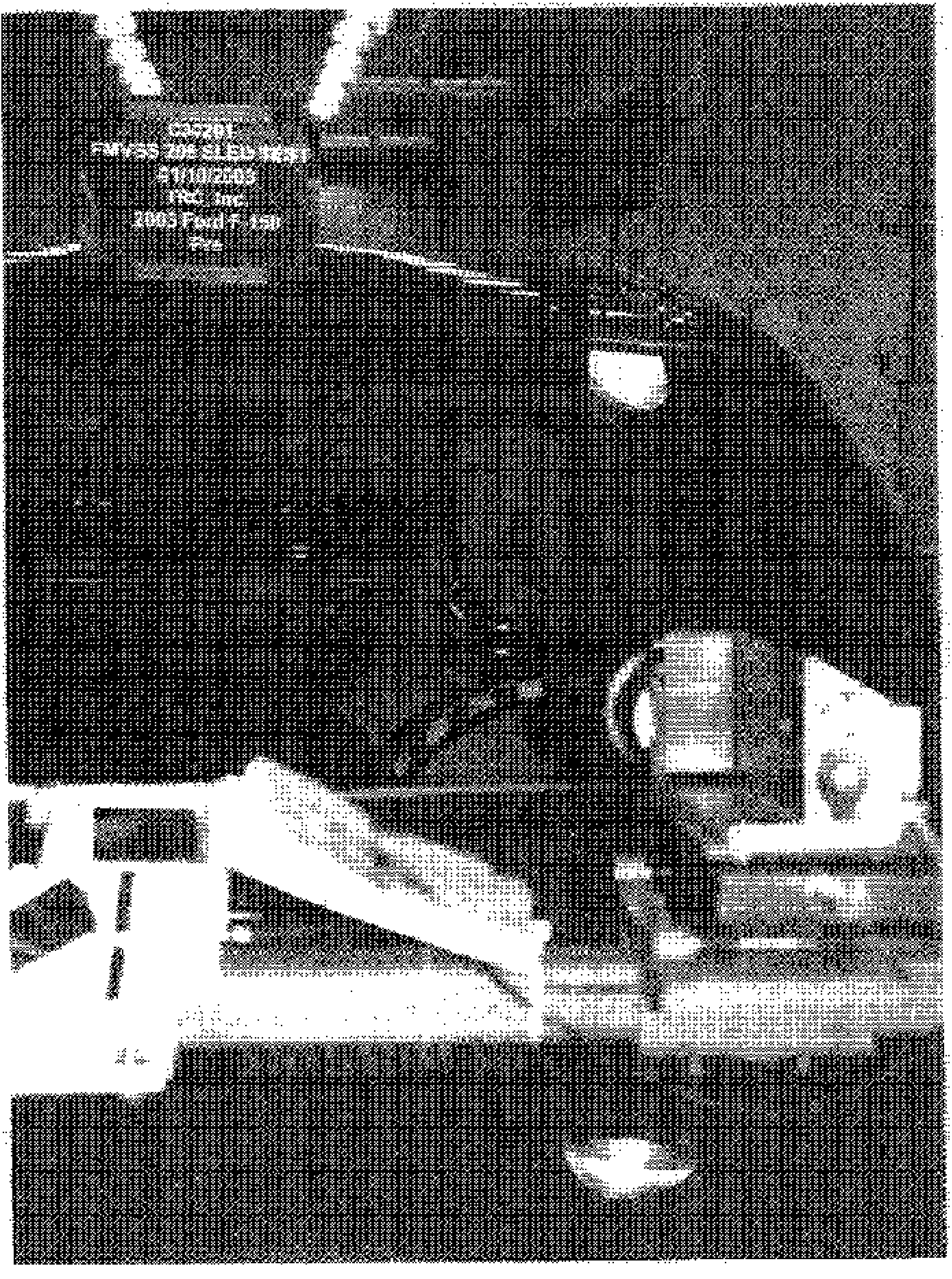


Figure A-15. Pre-Test Driver Dummy Position Front View

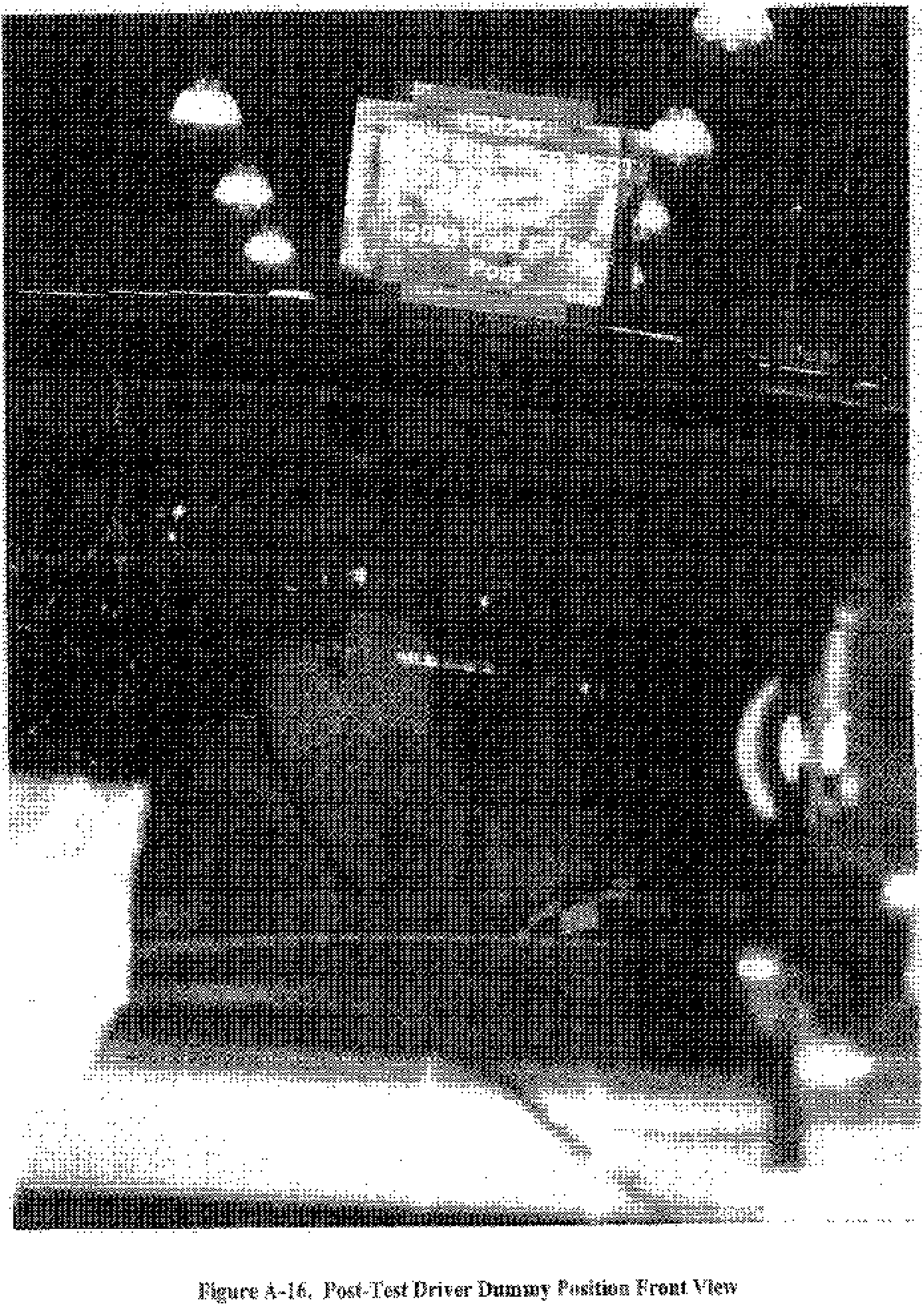


Figure A-16. Post-Test Driver Dummy Position Front View

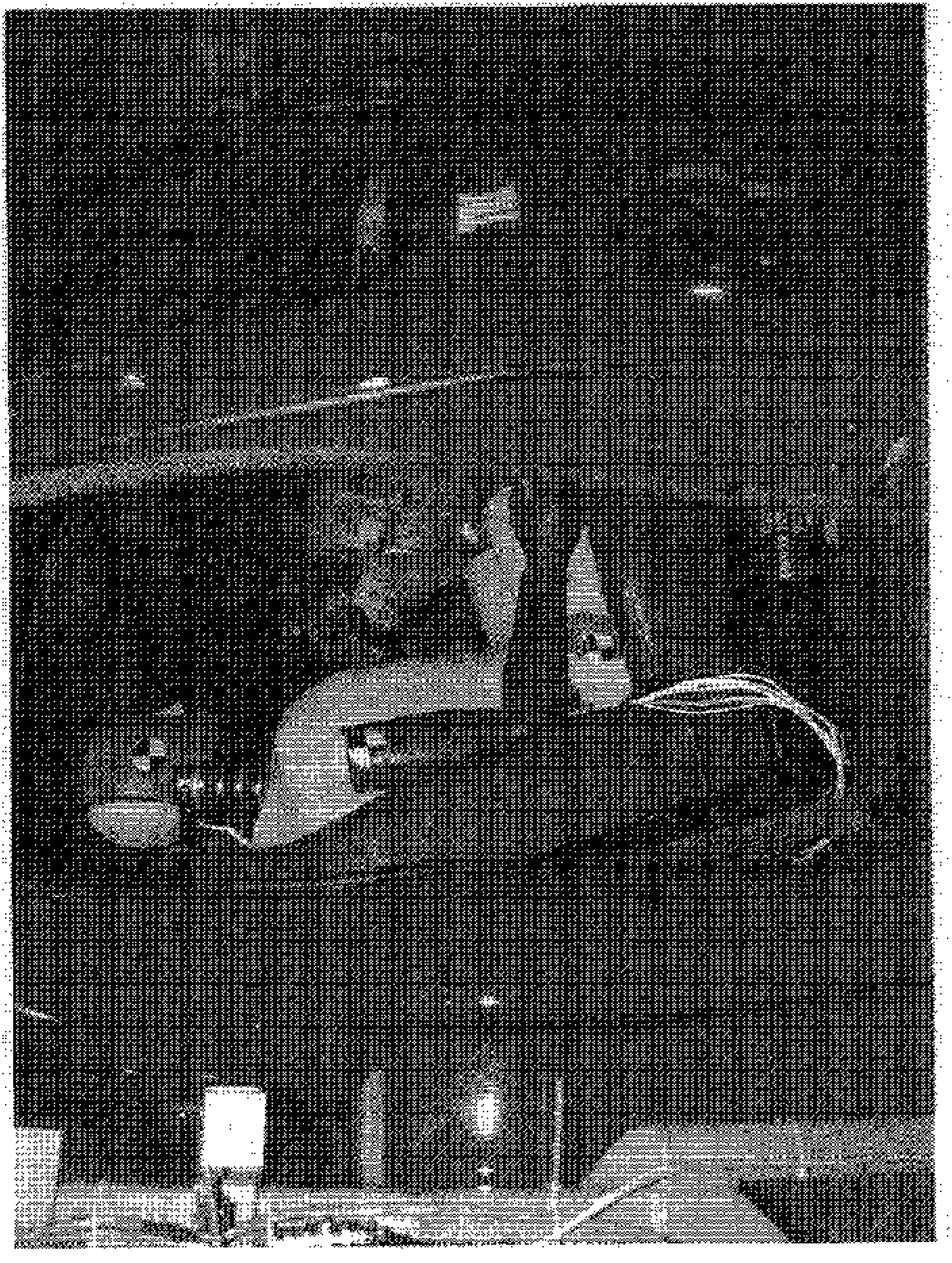


Figure A-17. Pre-Test Passenger Dummy Position View with Door Open - View 1

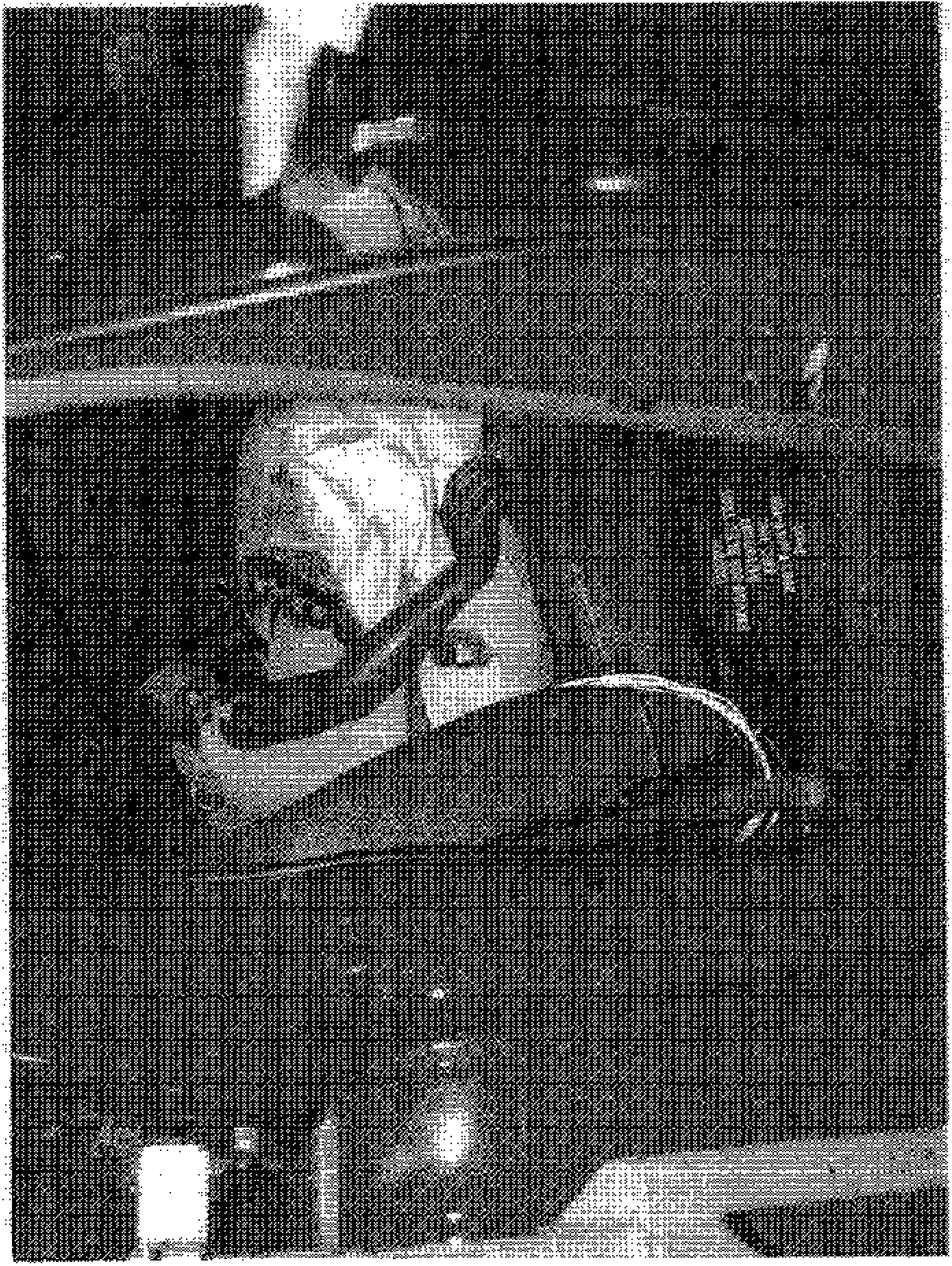


Figure A-18. Post-Test Passenger Dummy Position View with Door Open - View 1

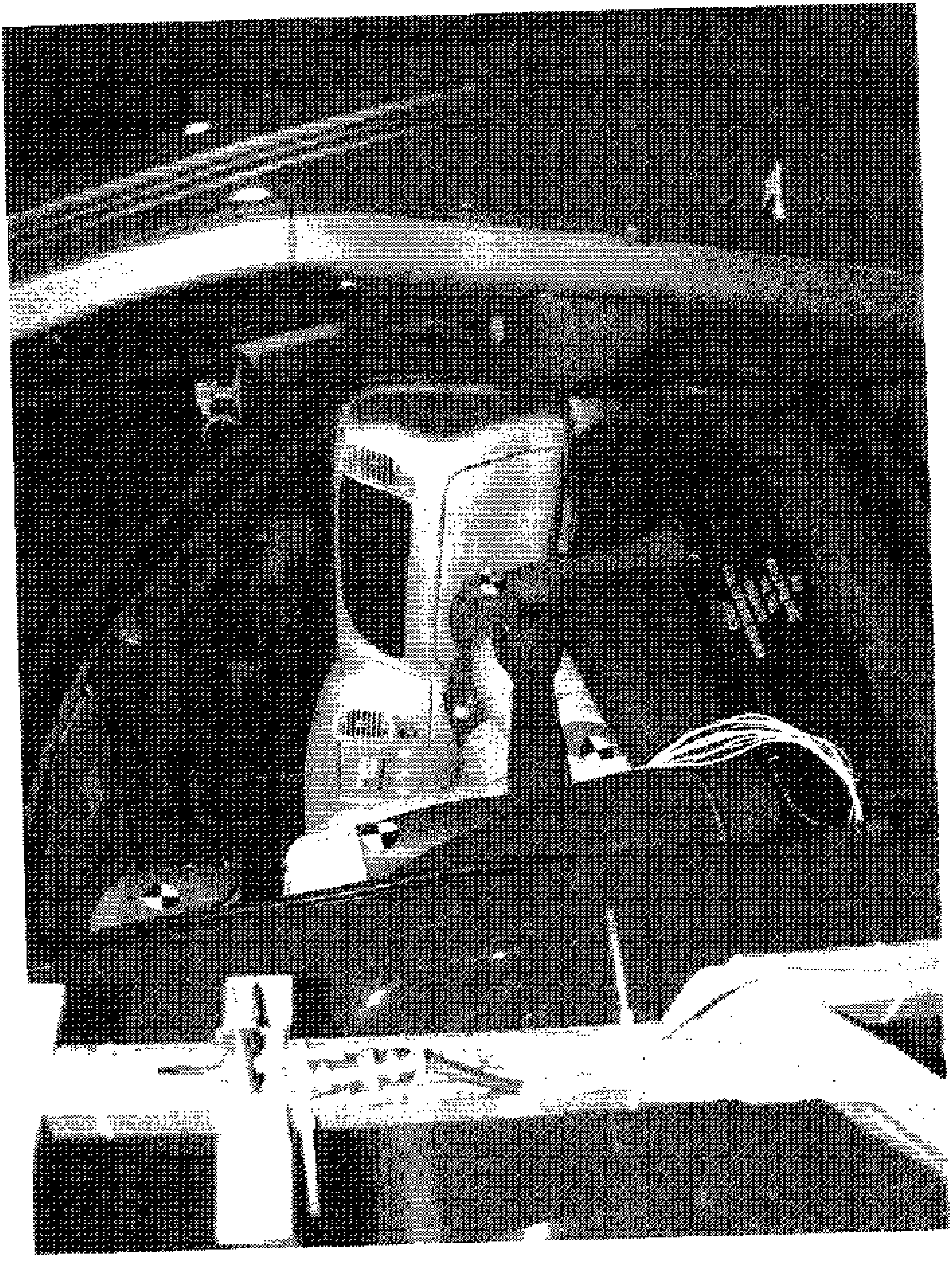


Figure A-19. Pre-Test Passenger Dummy Position View with Door Open - View 2

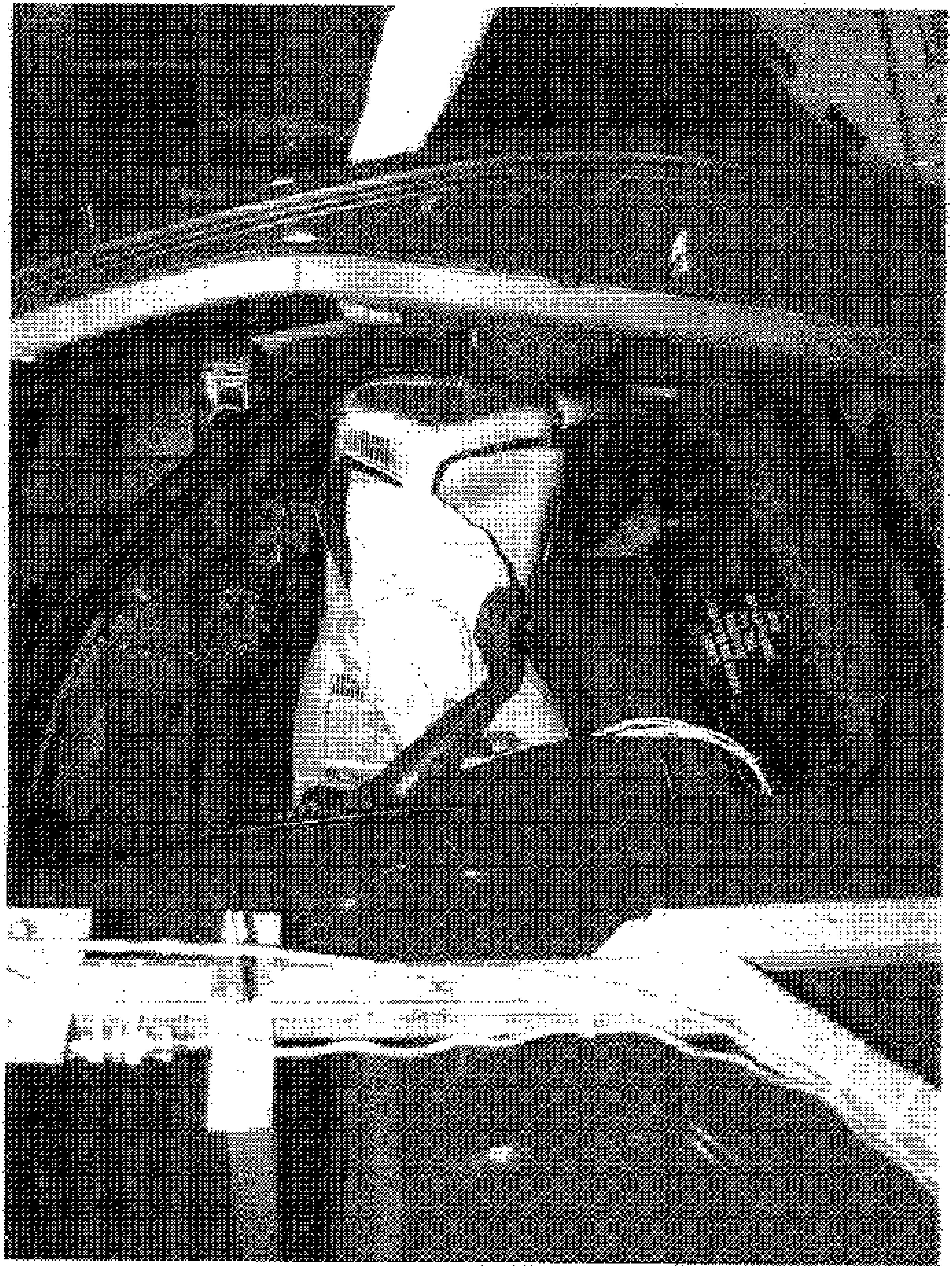


Figure A-20. Post-Test Passenger Dummy Position View with Door Open - View 2

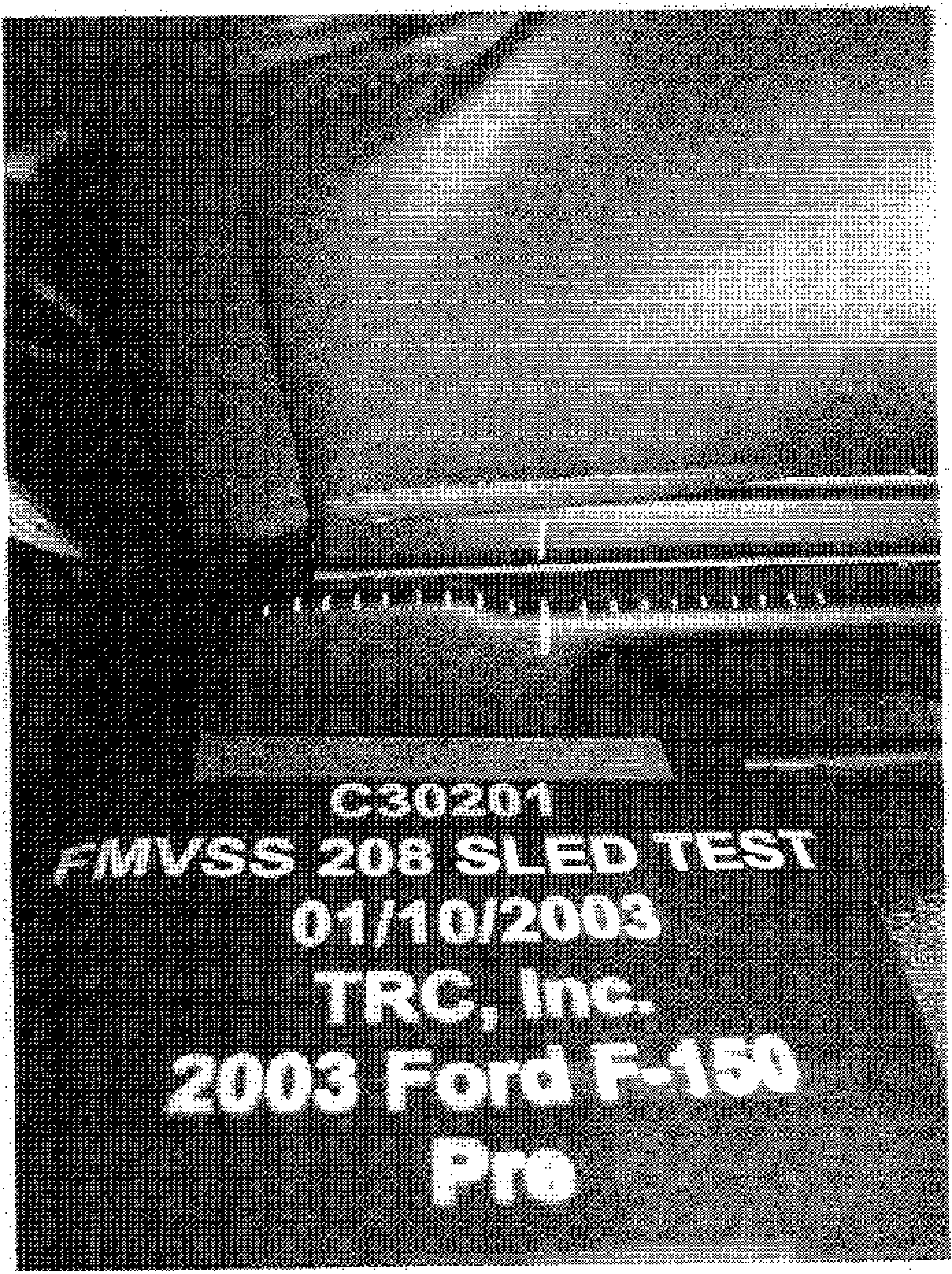


Figure A-21. Pre-Test Passenger Seat Track Position View

Figure A-23. Post-Test Passenger Seat Track Position View

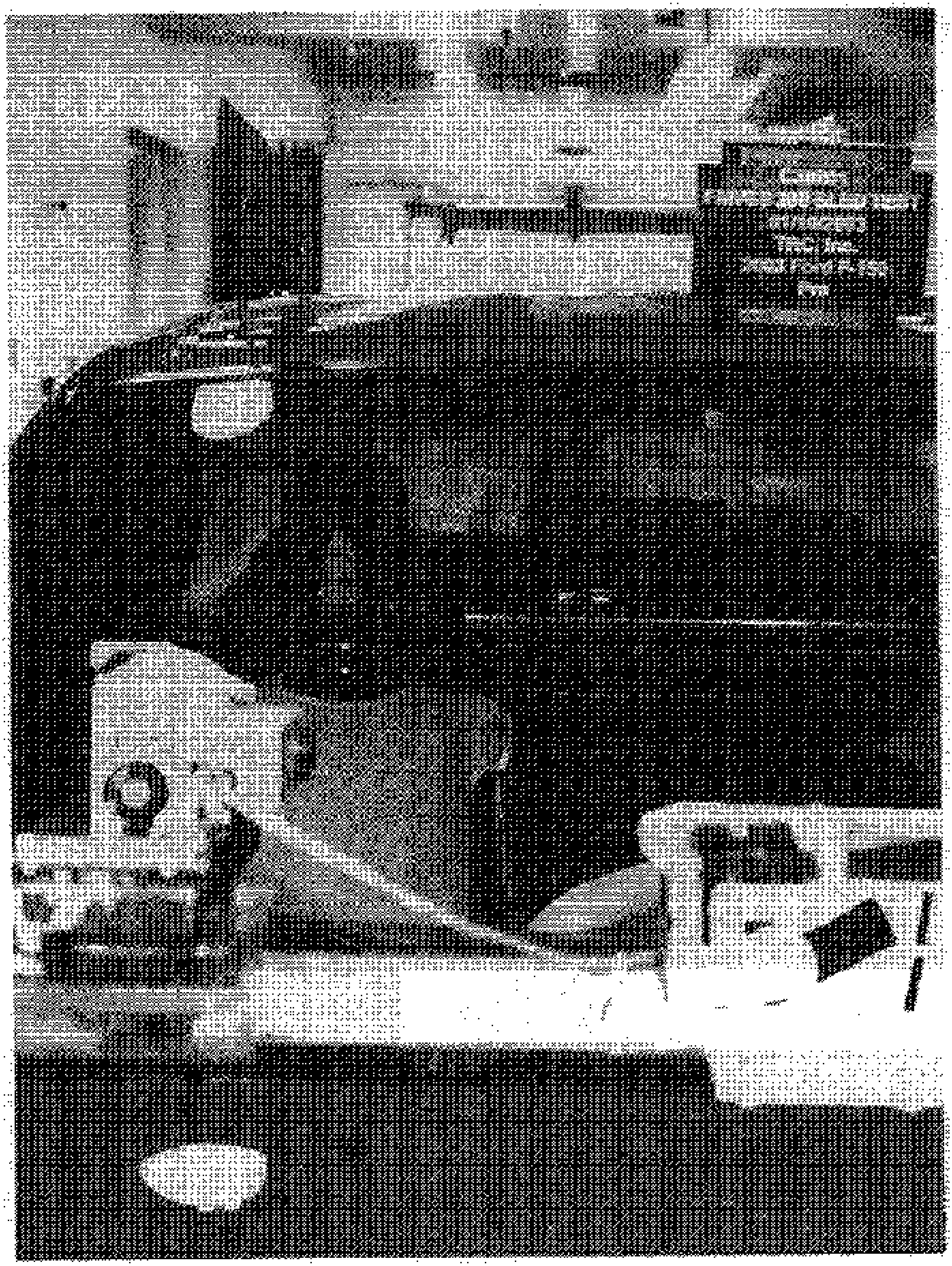


Figure A-23. Pre-Test Passenger Dummy Position Front View

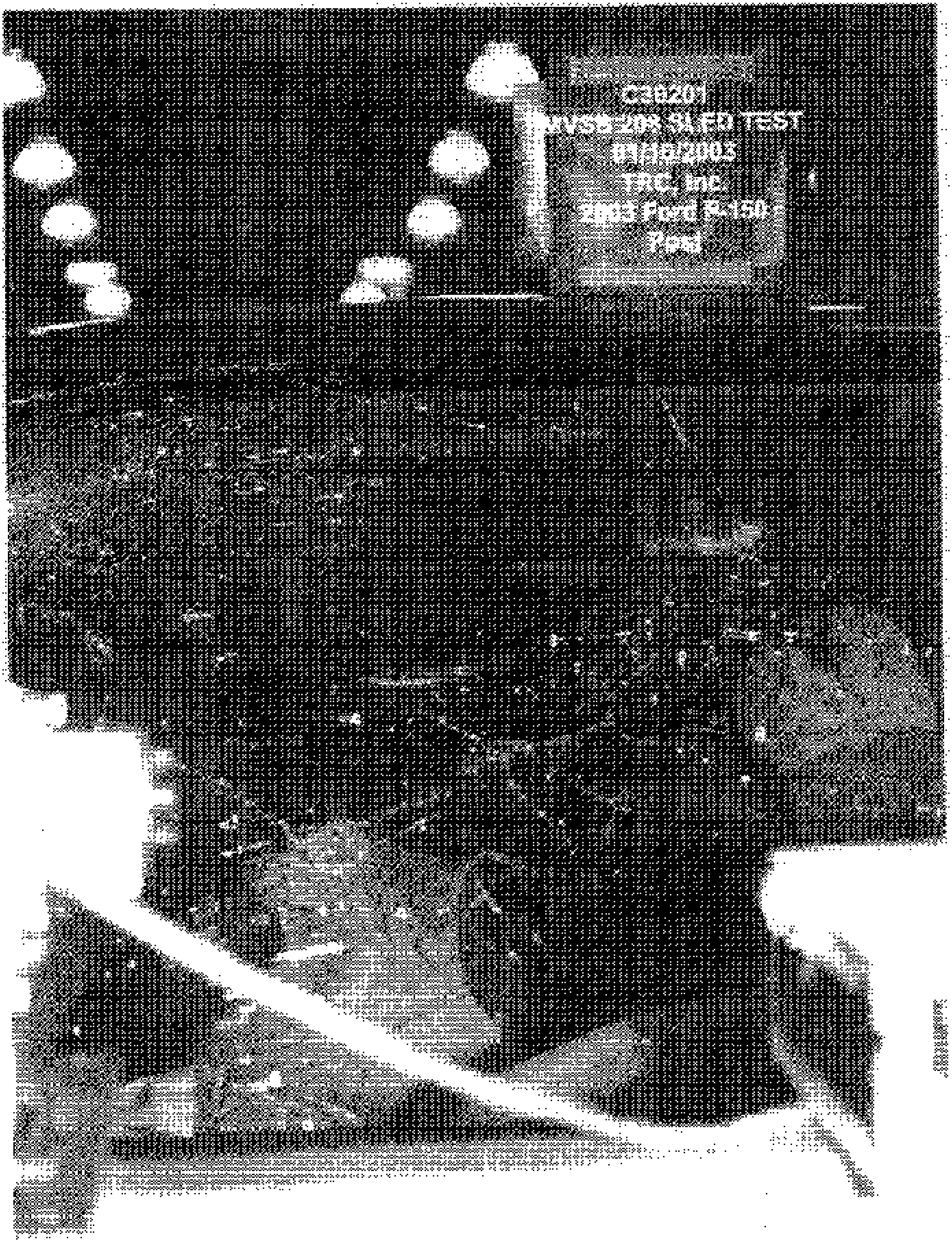


Figure A-24. Post-Test Passenger Dummy Position Front View

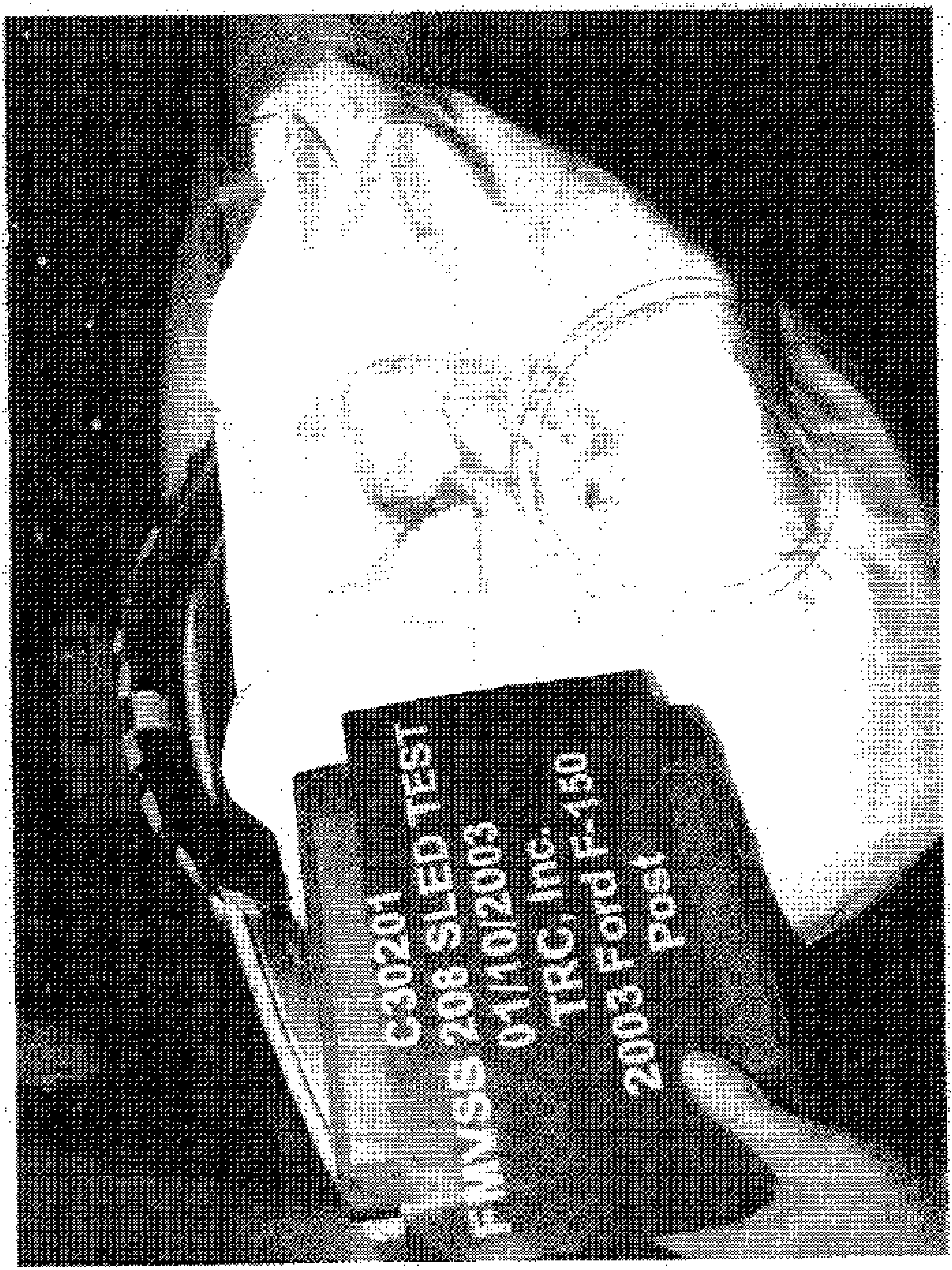


Figure A-25. Post-Test Driver Airbag View

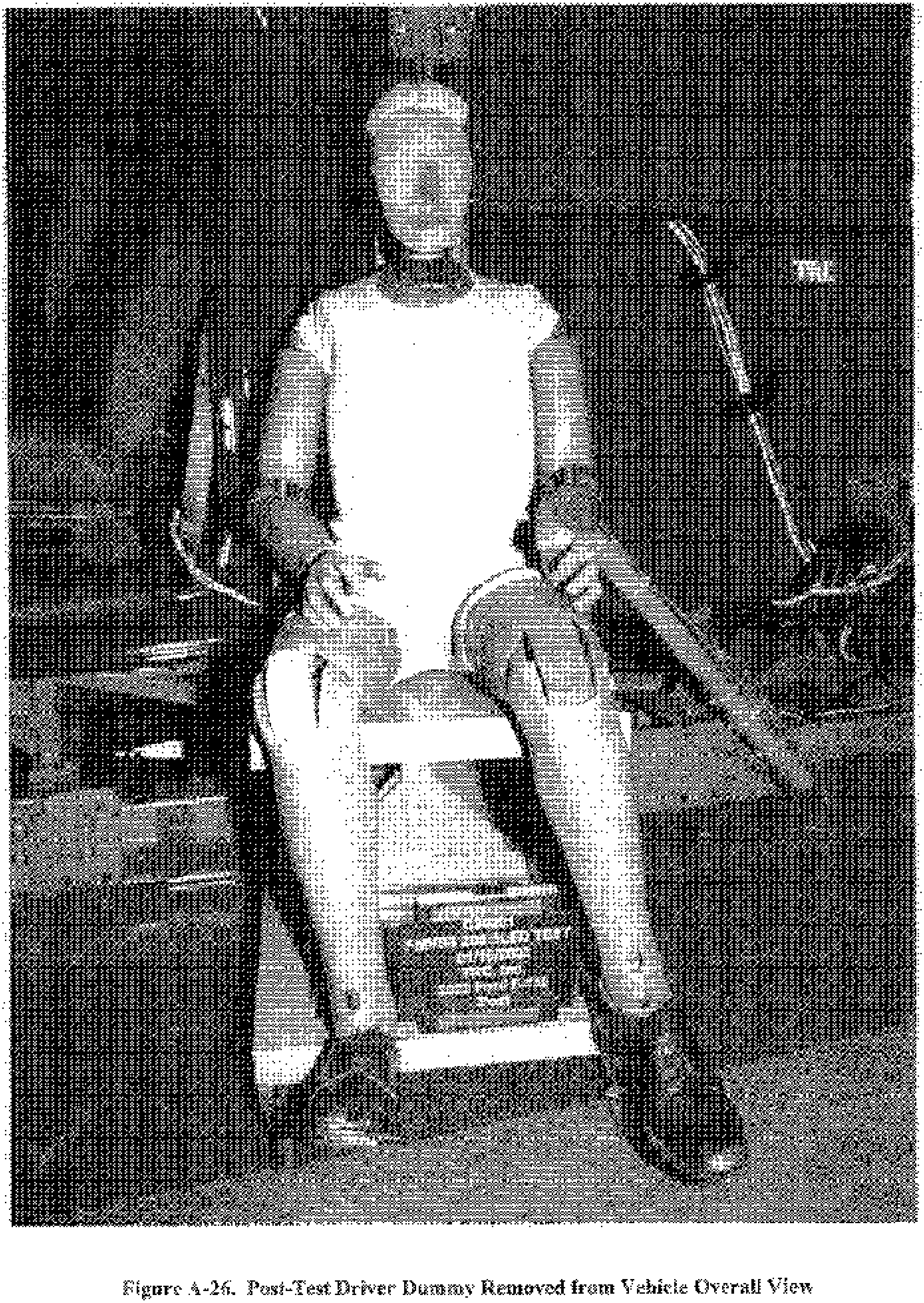


Figure A-26. Post-Test Driver Dummy Removed from Vehicle Overall View

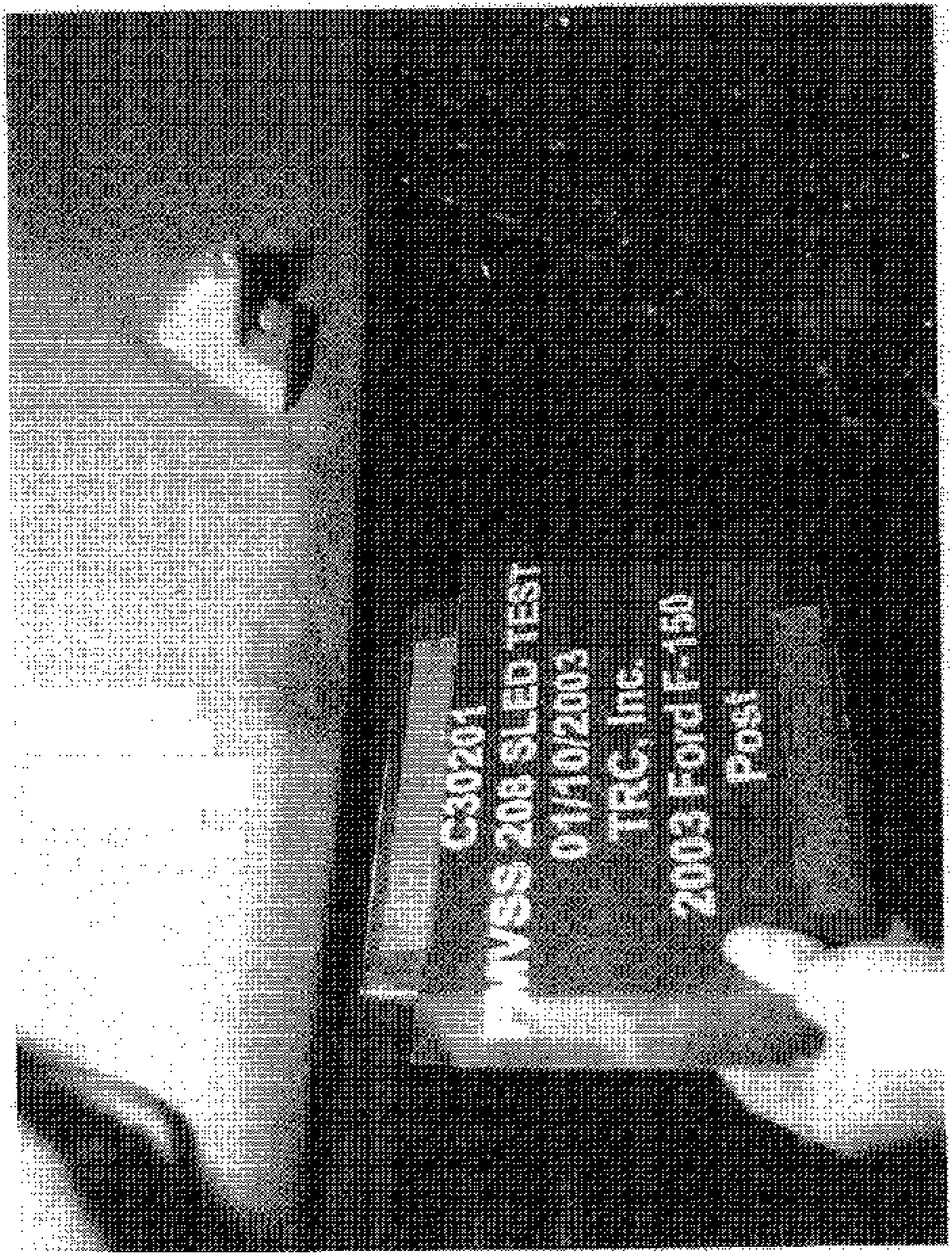


Figure A-27. Post-Test Driver Head Contact - View 1

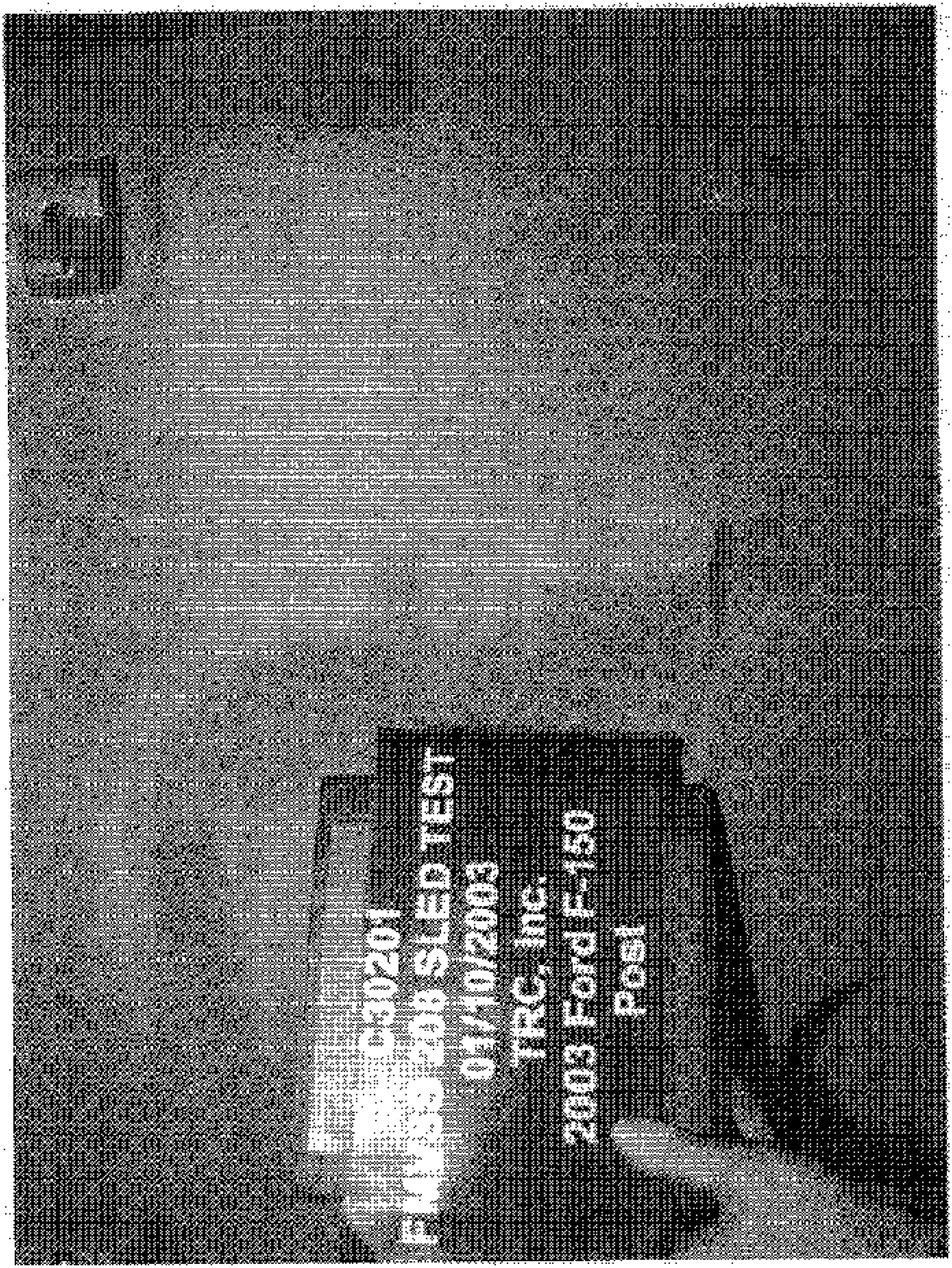


Figure A-28. Post-Test Driver Head Contact - View 2

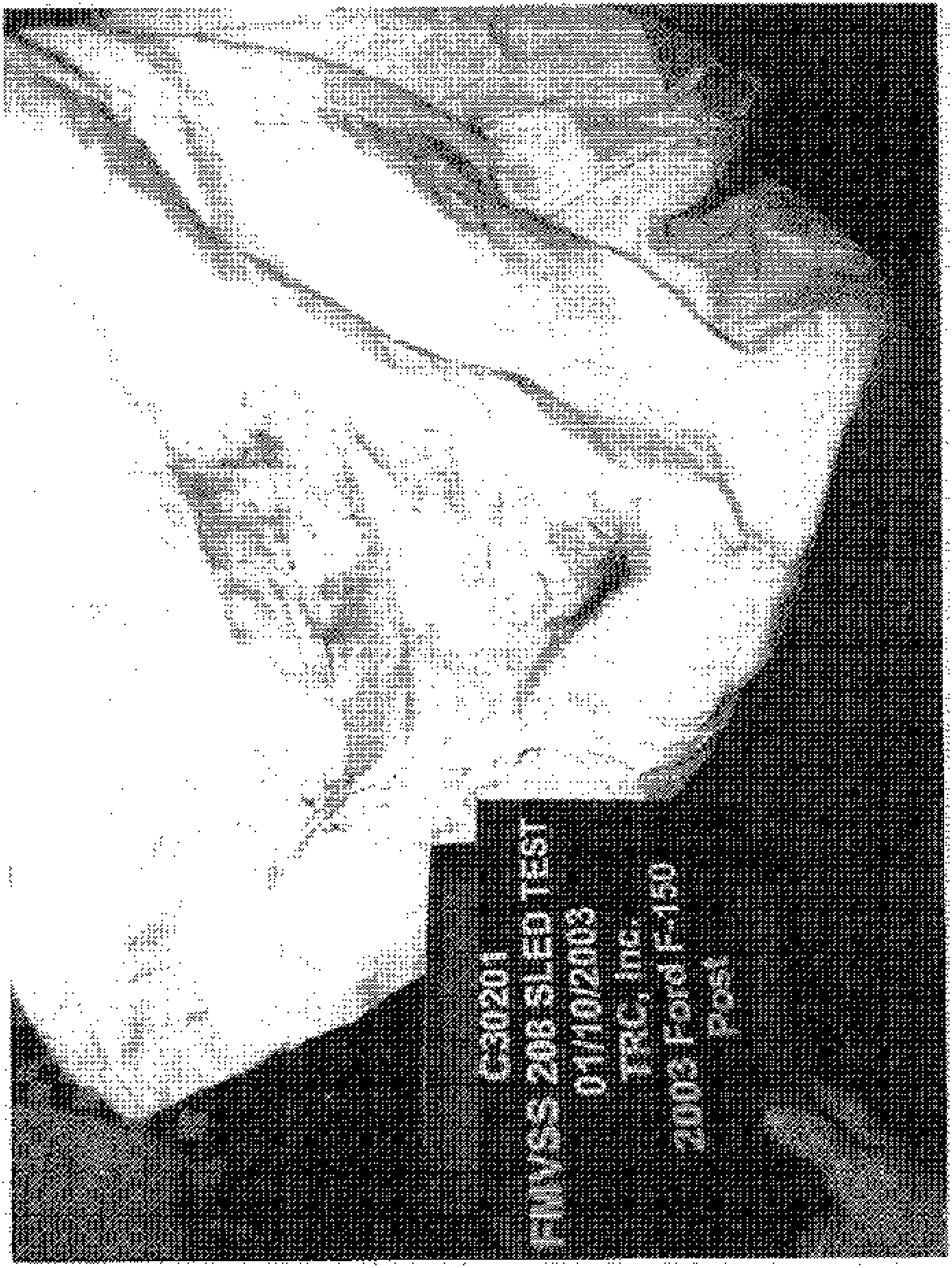


Figure A-29. Post-Test Passenger Airbag View

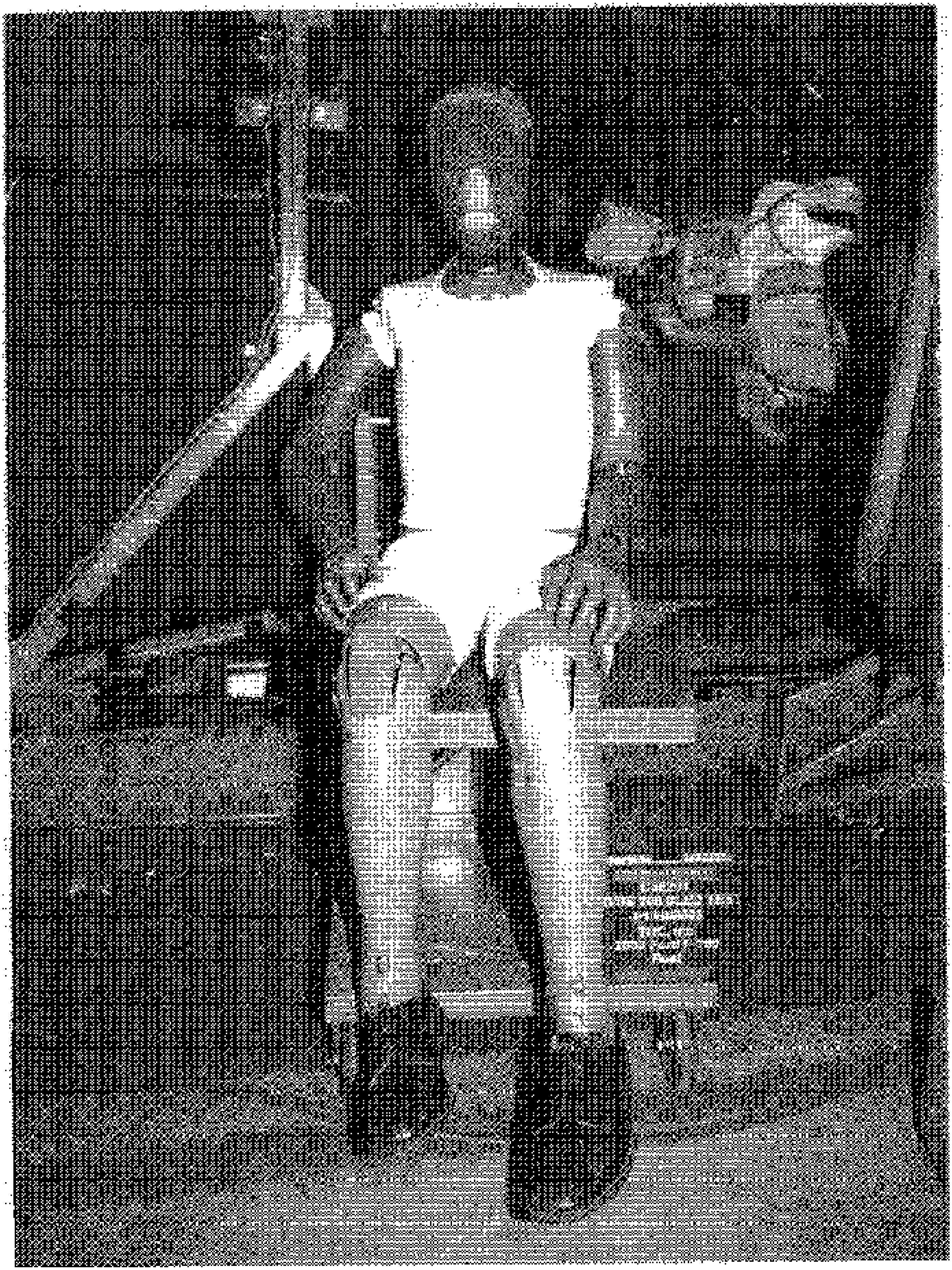


Figure A-30. Post-Test Passenger Dummy Removed from Vehicle Overall View

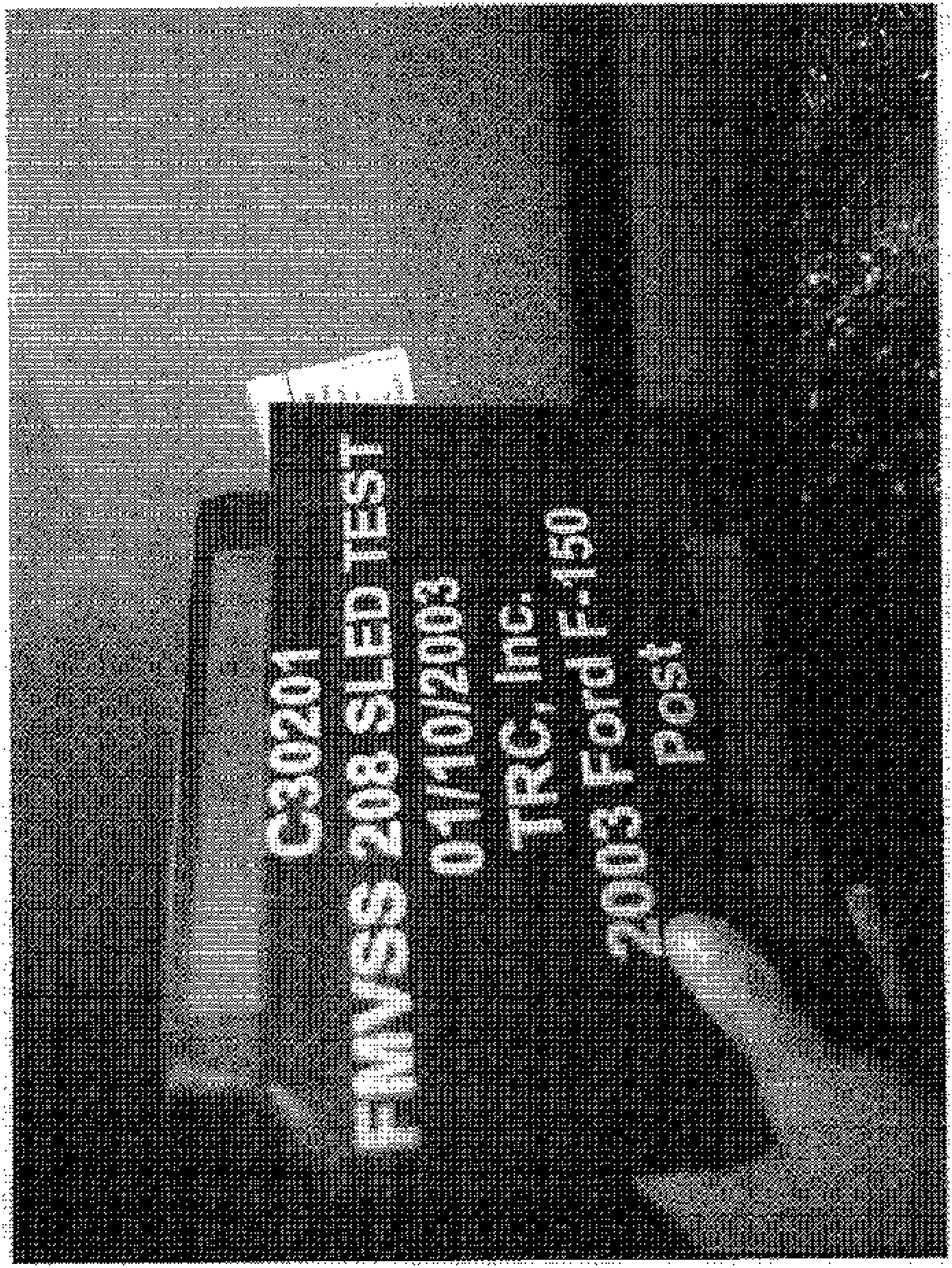


Figure A-31. Post-Test Passenger Head Contact - View 1

Figure A-32. Post-Test Passenger Head Contact - View 2

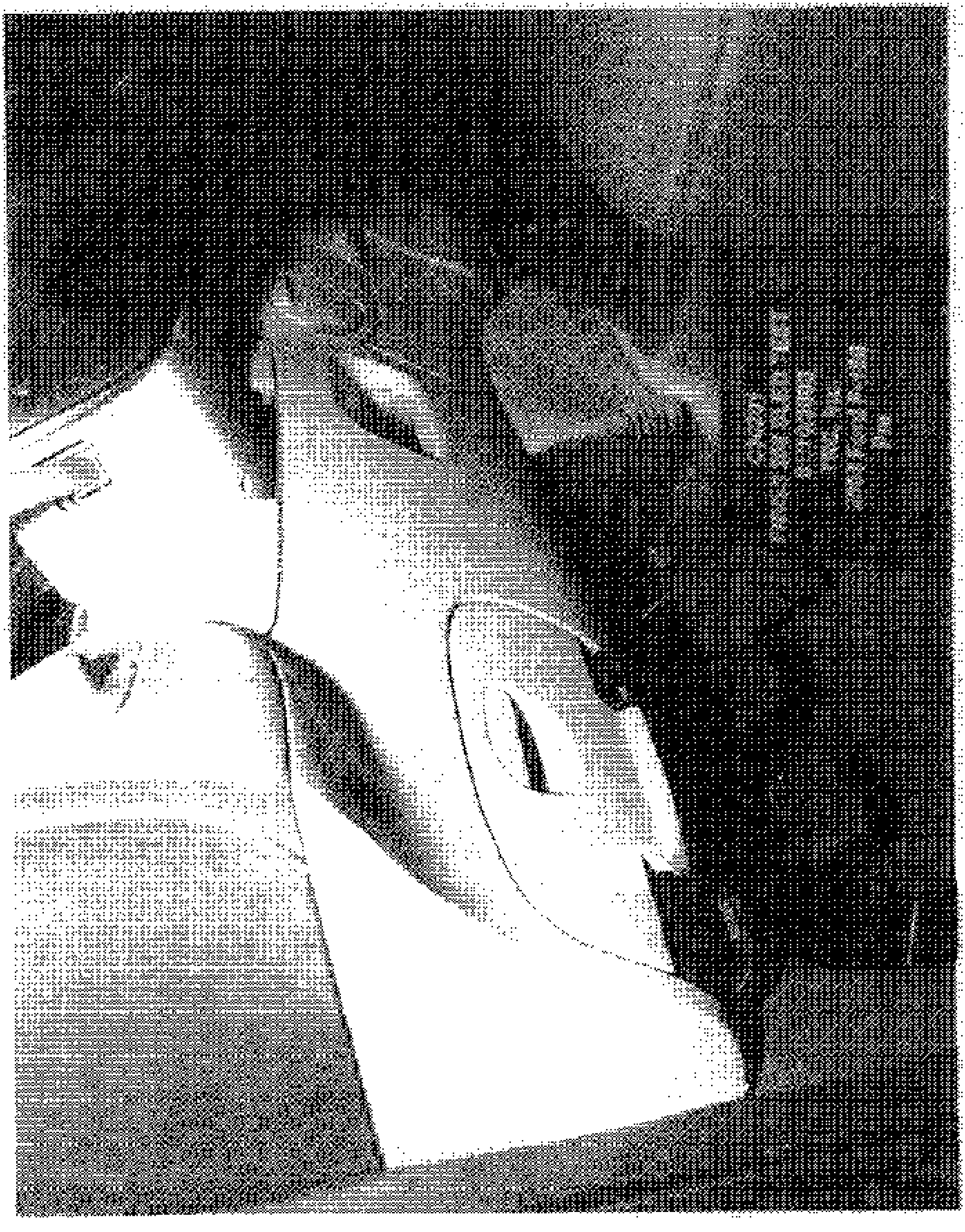


Figure A-33. Pre-Test Driver Knee Bolster View

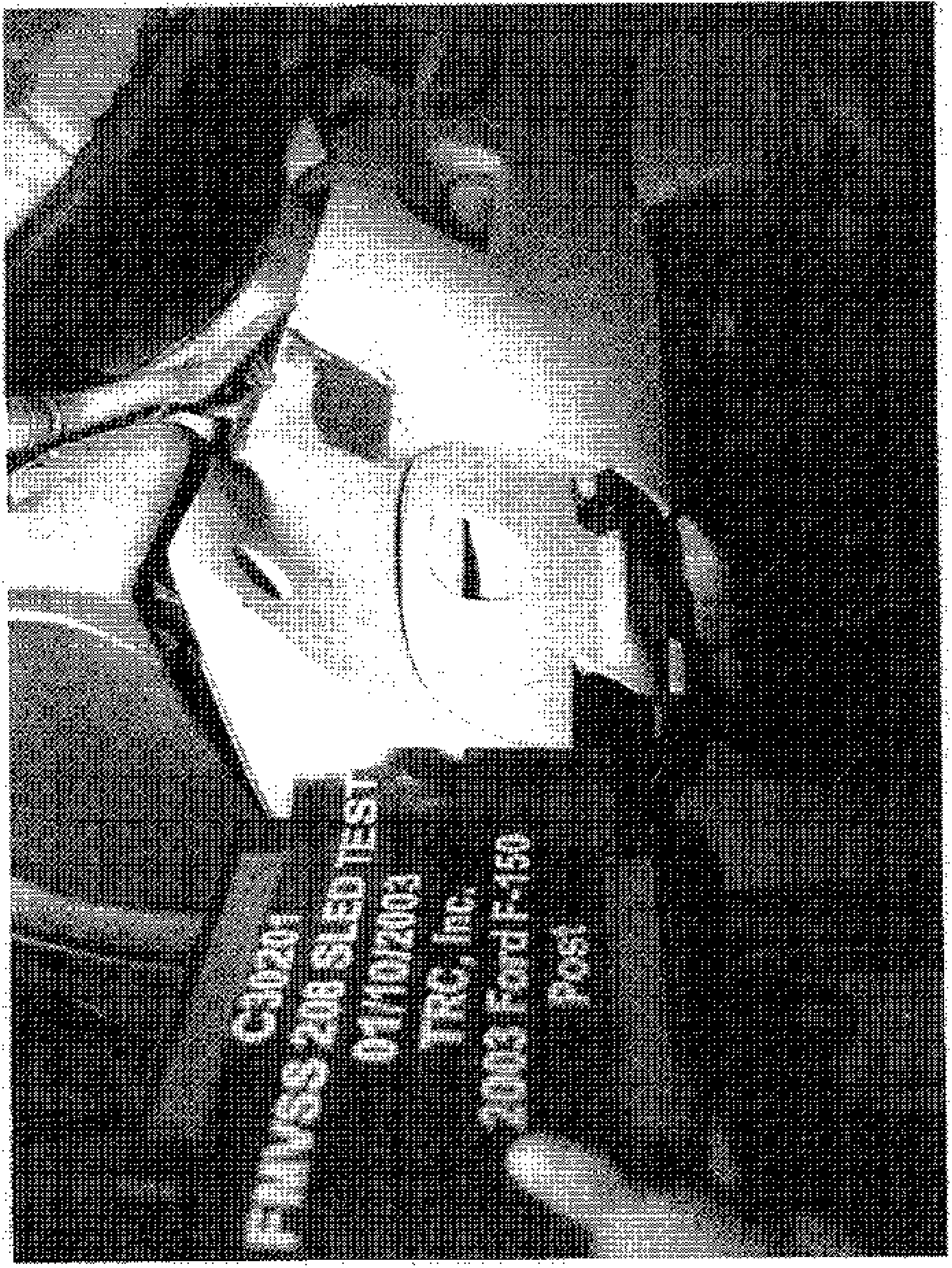


Figure A-34. Post-Test Driver Knee Bolster View

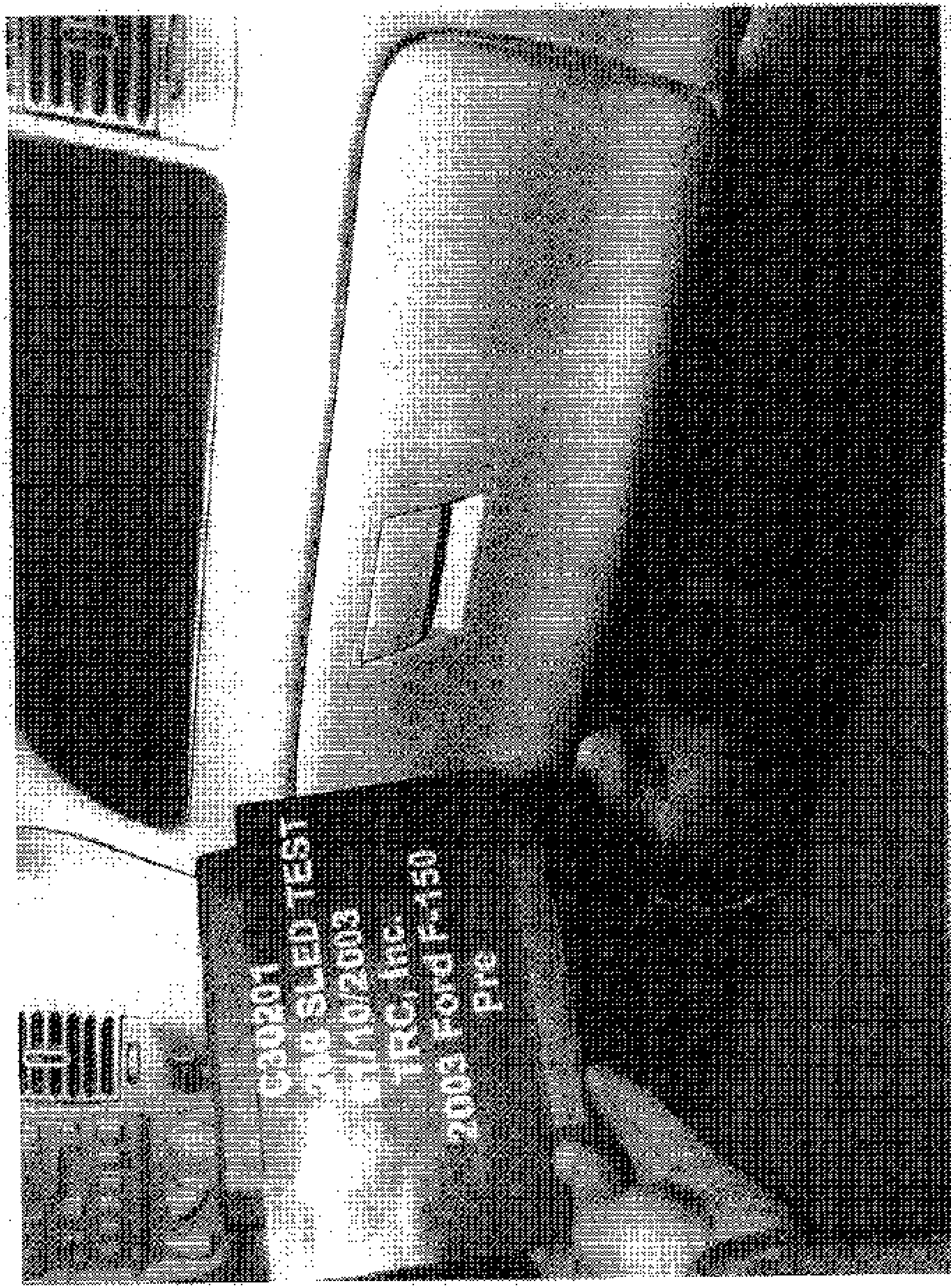


Figure A-35. Pre-Test Passenger Glove Box View

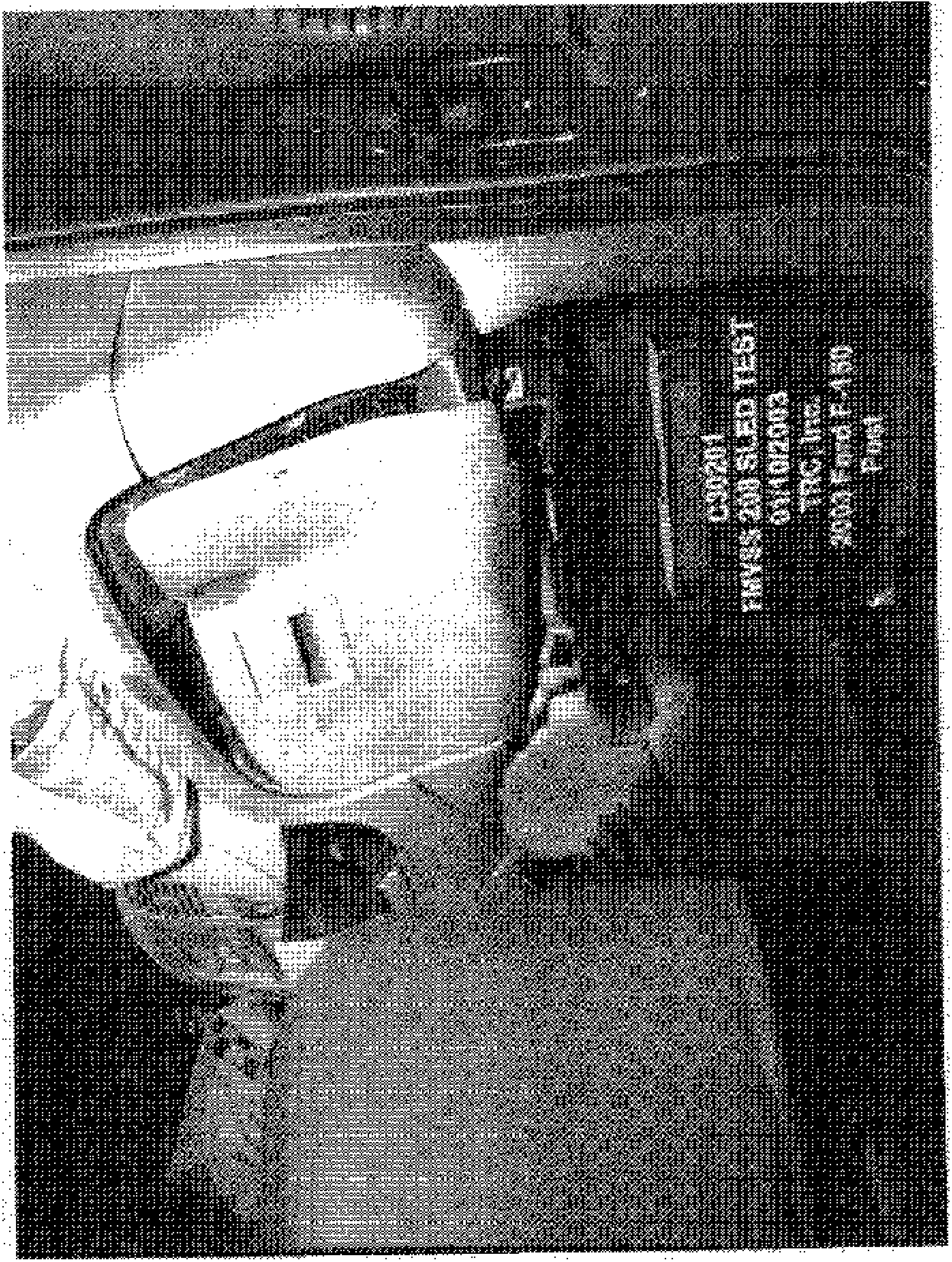


Figure A-36. Post-Test Passenger Glove Box View

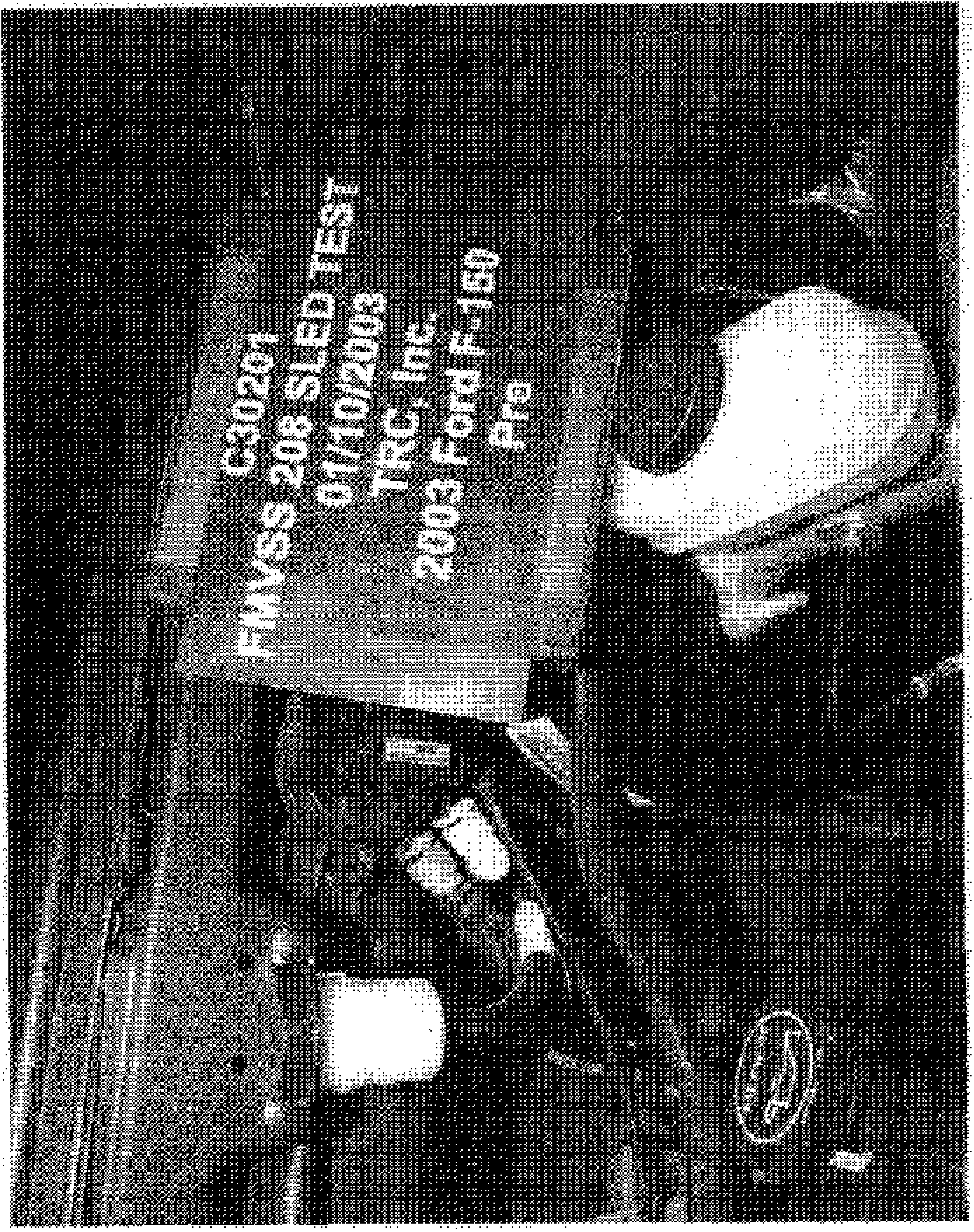


Figure A-37. Pre-Test Steering Column Linkage in Engine Compartment View

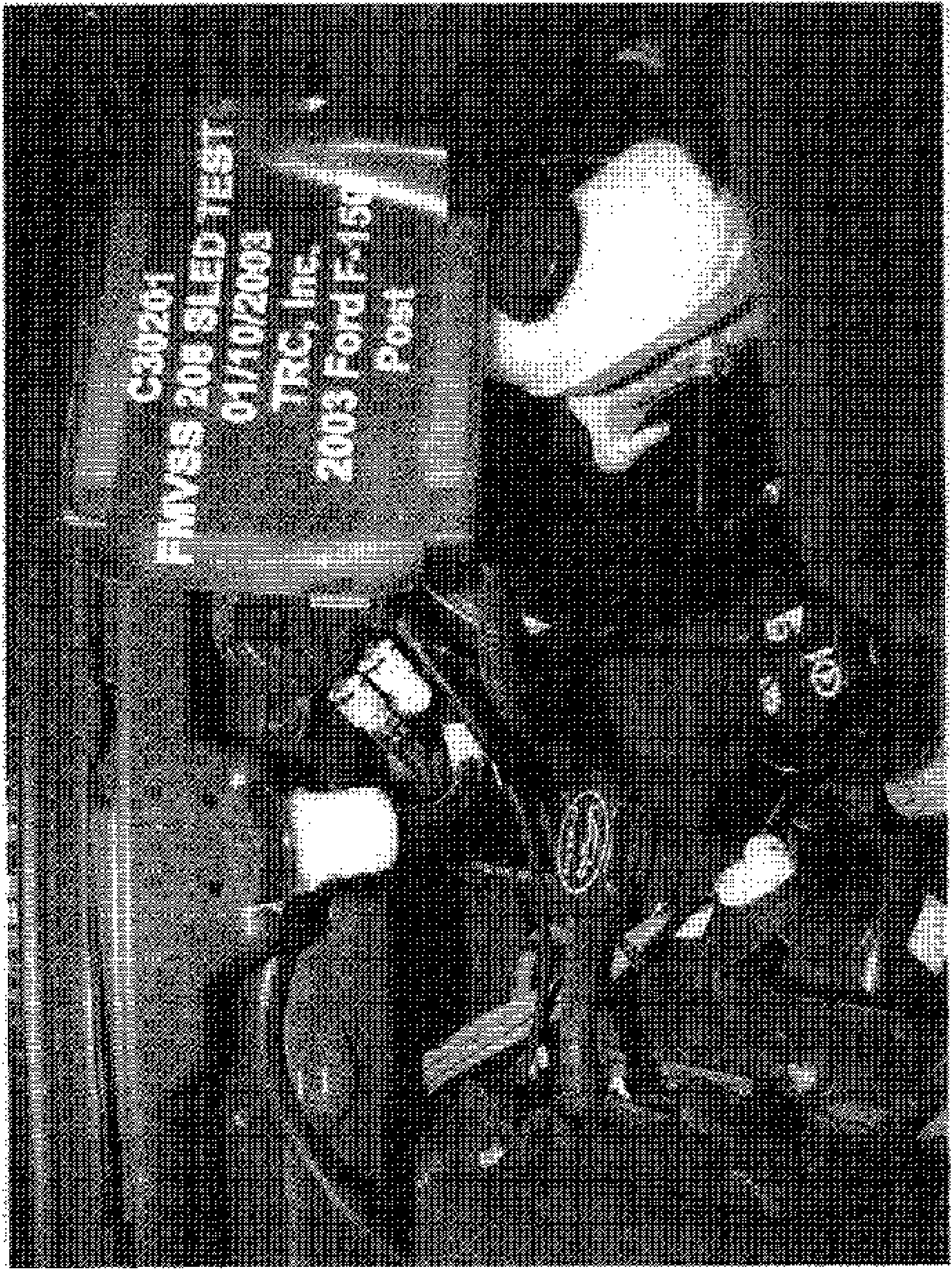


Figure A-38. Post-Test Steering Column Linkage in Engine Compartment View

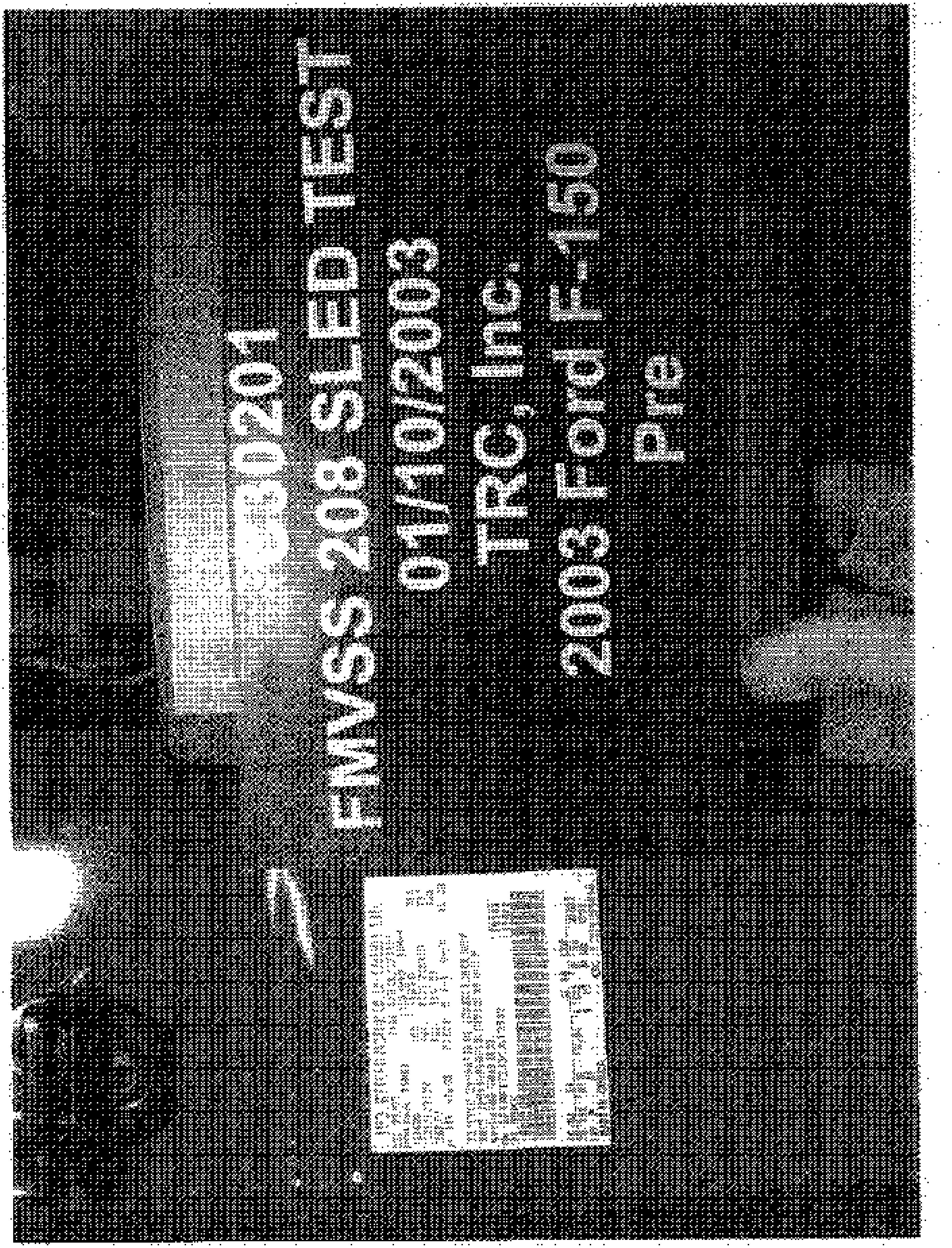


Figure A-39. Pre-Test Vehicle Certification Label View

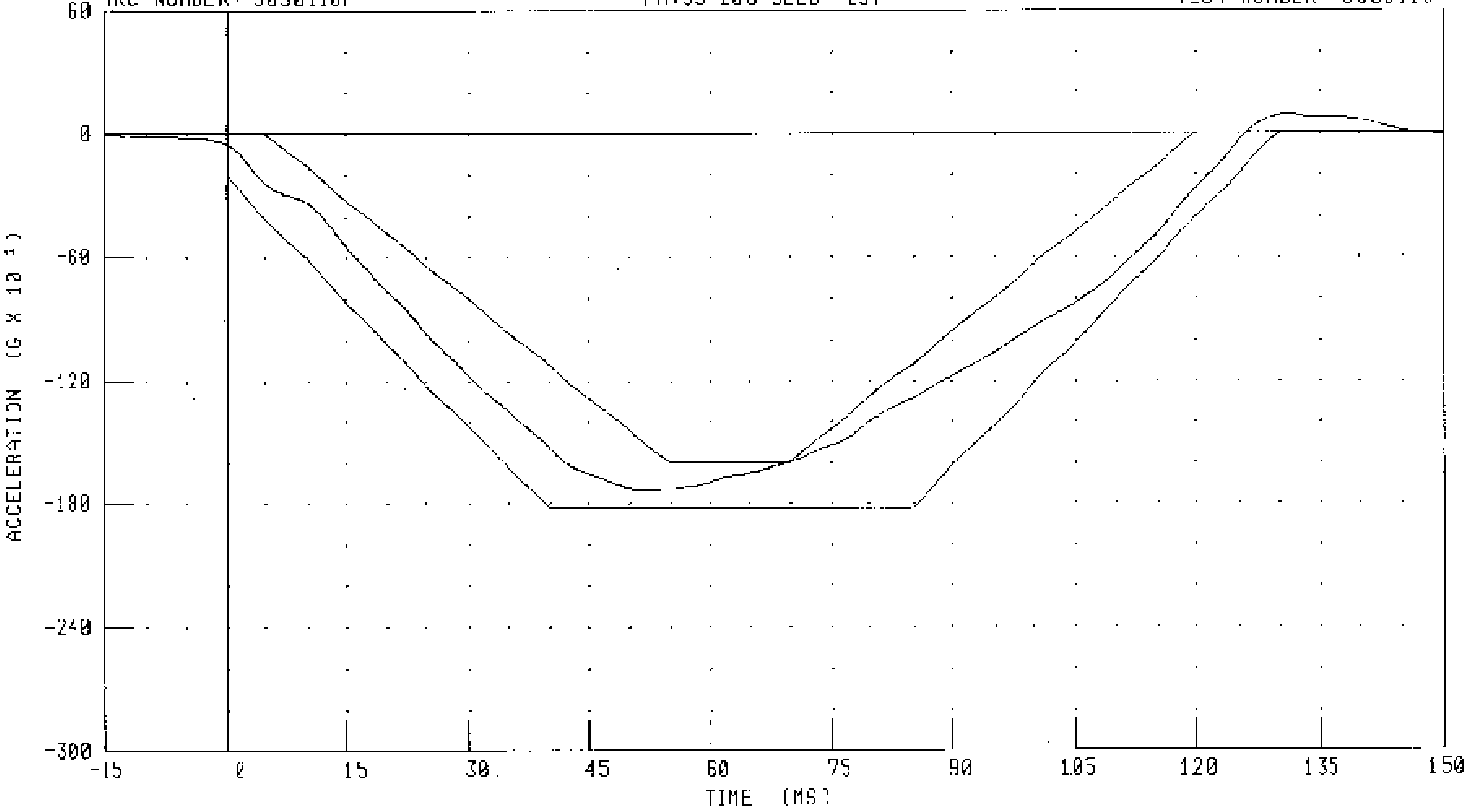
Appendix B

Data Plots

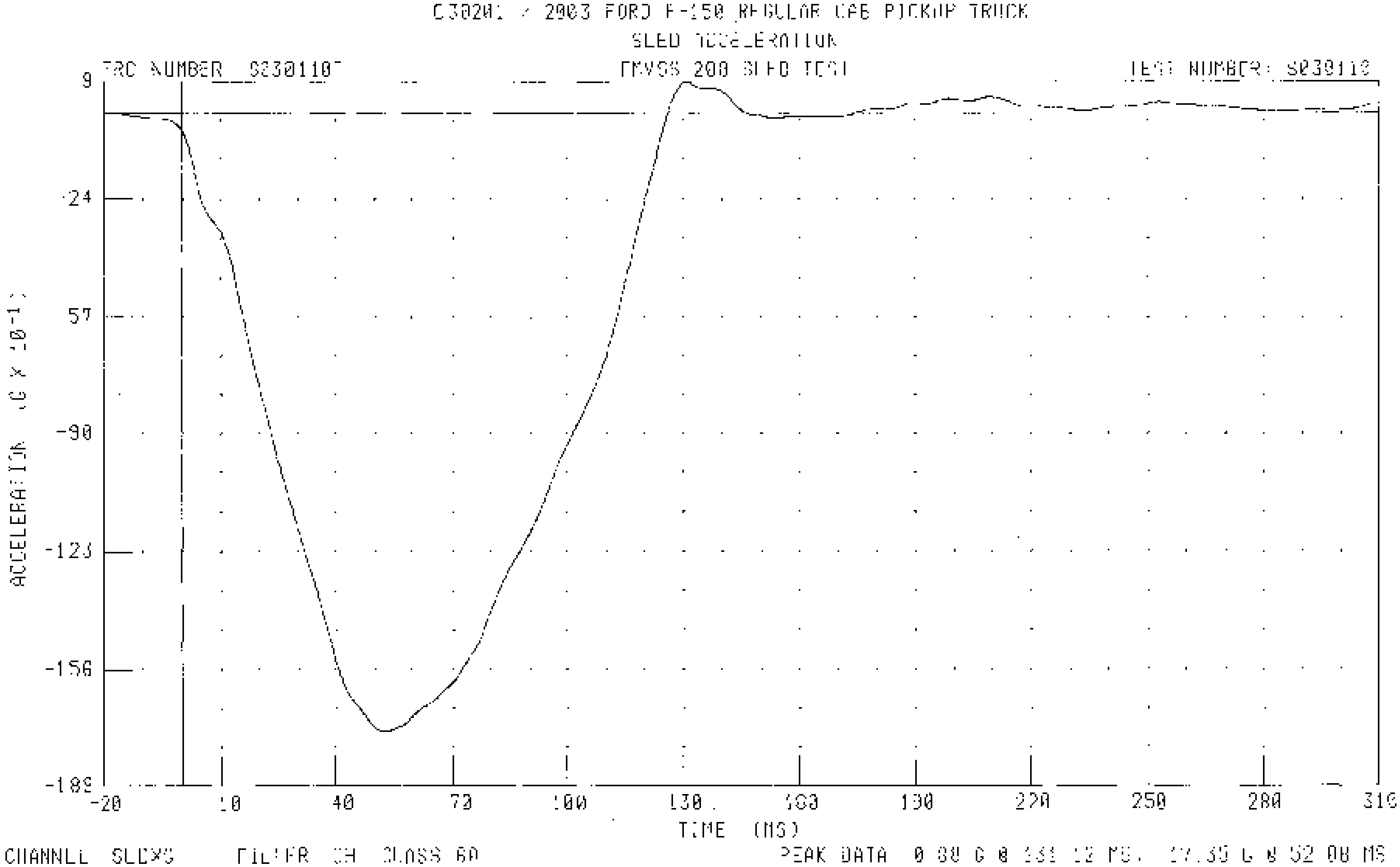
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
SLED ACCELERATION
FMVSS 208 SLED TEST

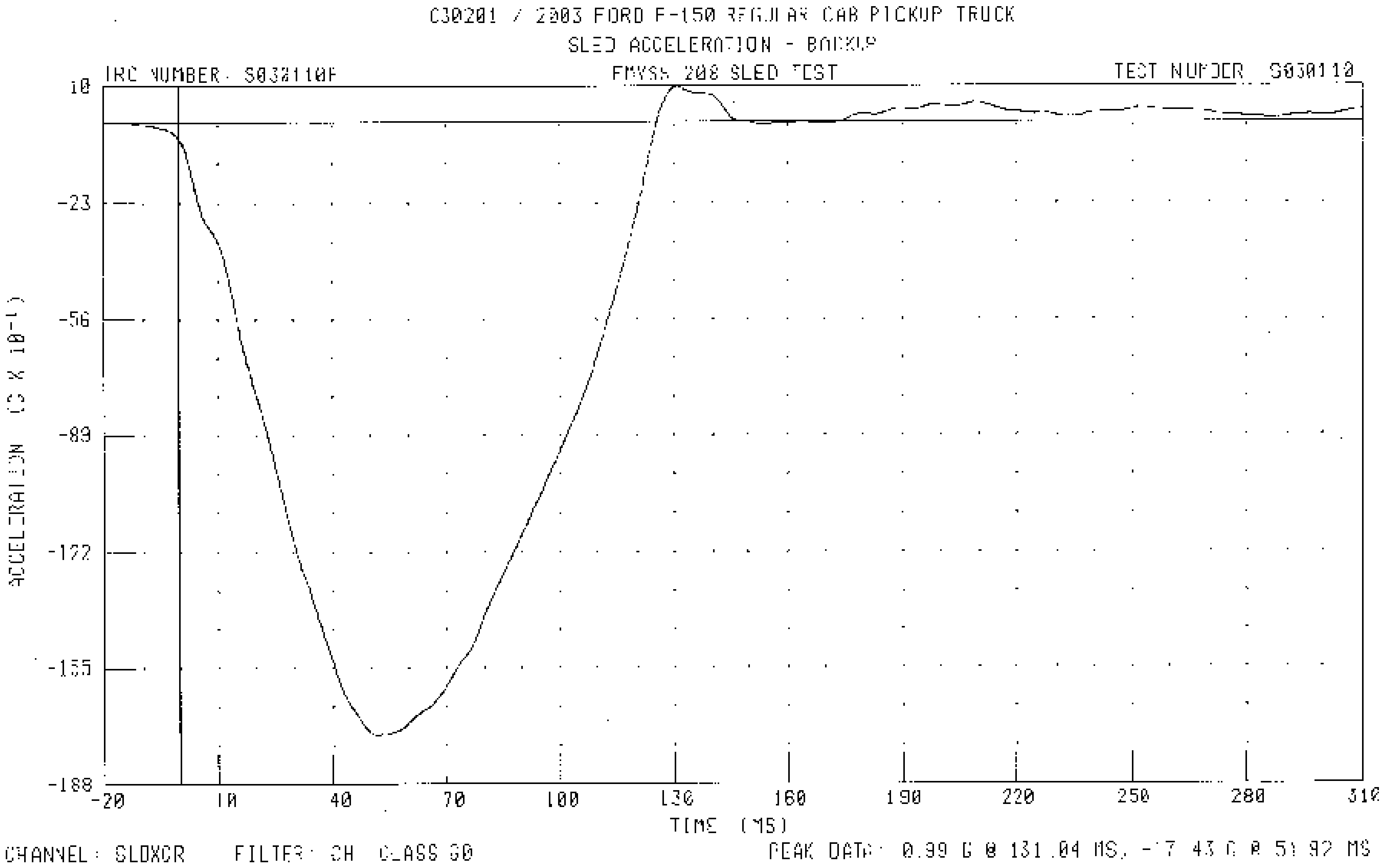
IRC NUMBER: S030110F

TEST NUMBER: S030110

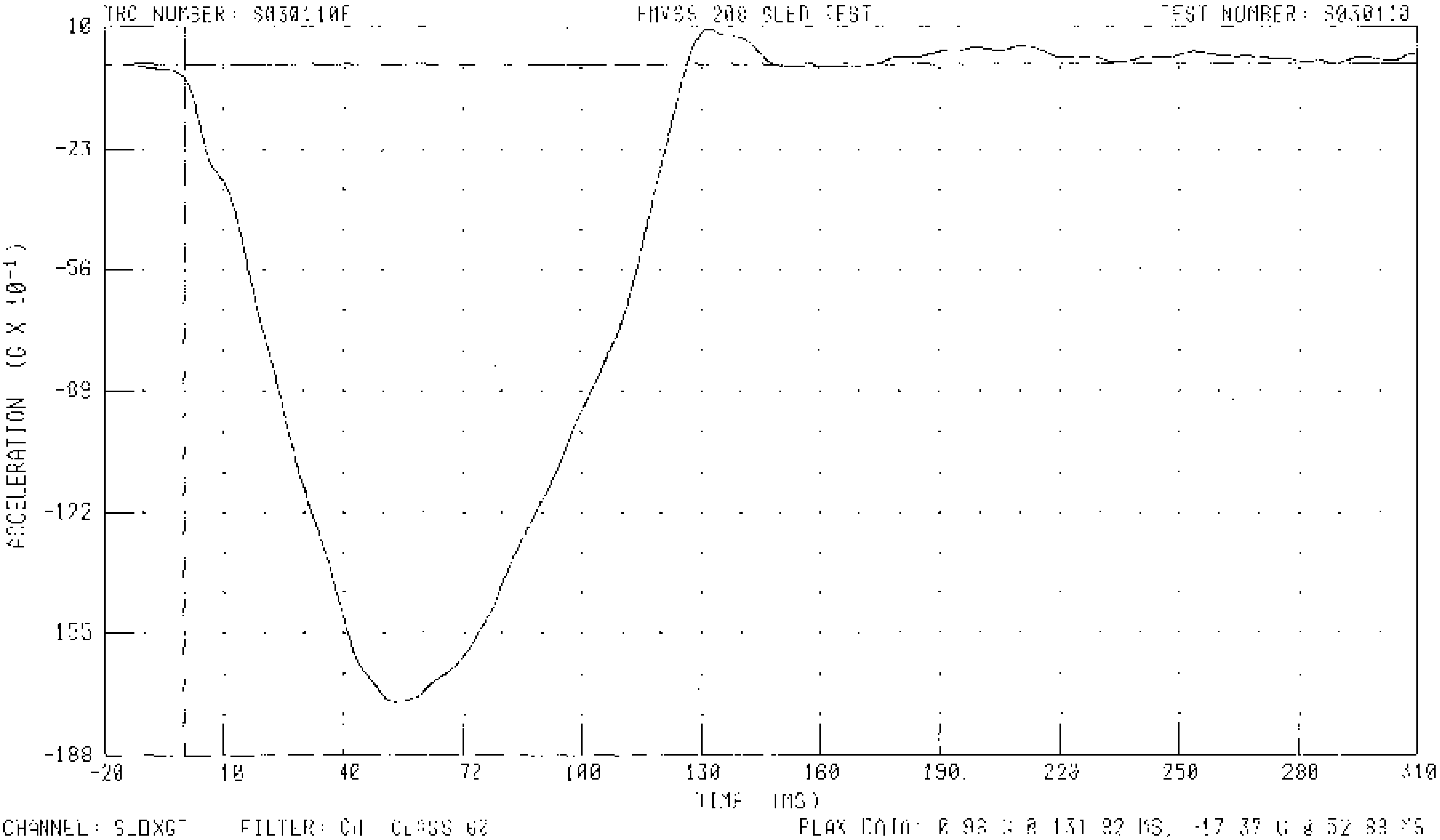


CHANNEL: SLDXG FILTER: CH. CLASS 60 PEAK DATA 0.88 G @ 131.12 MS; -17.55 G @ 52.88 MS

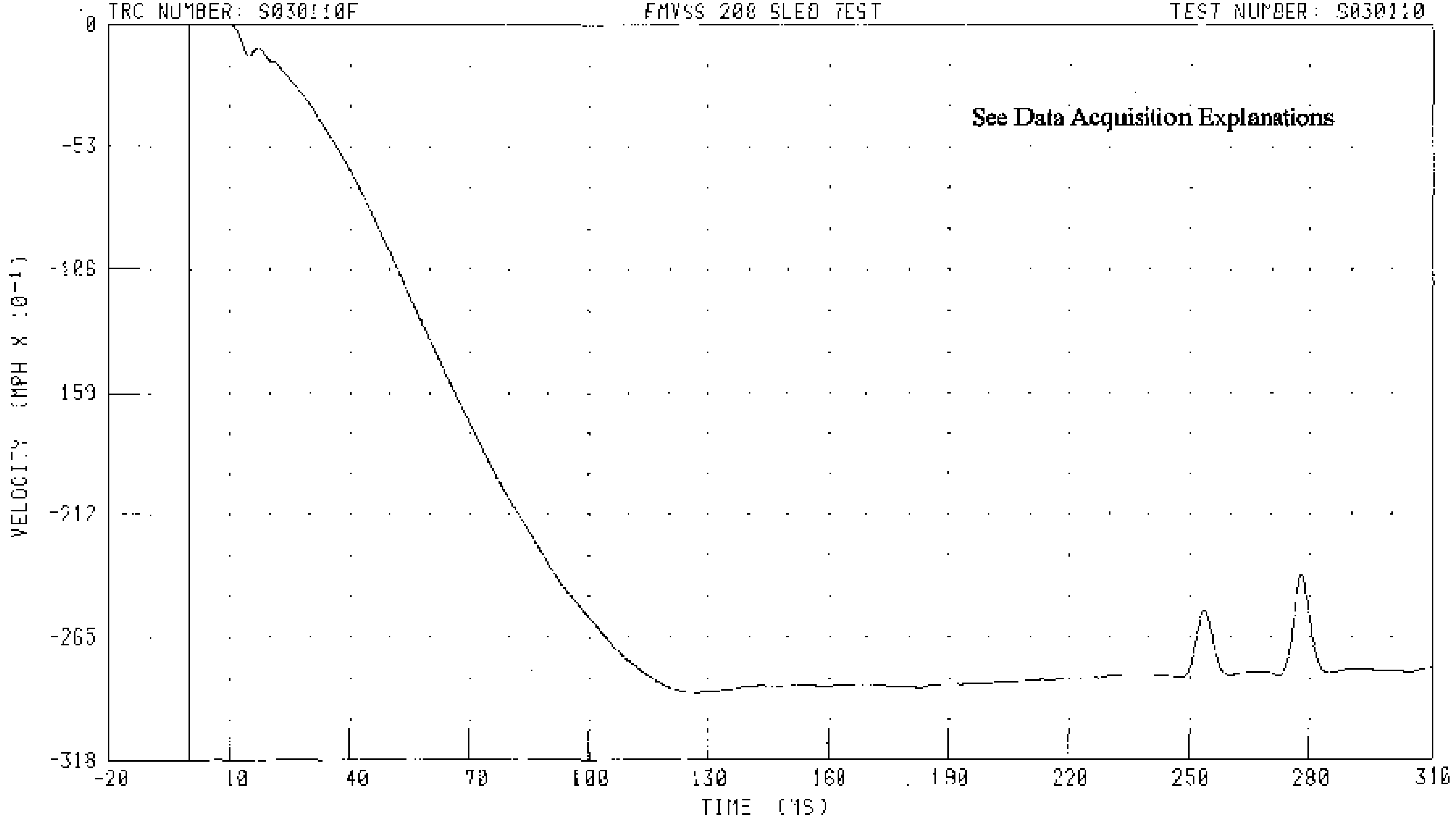

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
SLED ACCELERATION
FMVSS 208 SLED TEST
TRC NUMBER S030110
TEST NUMBER: S030110
ACCELERATION (G X 10-1)
9
-24
-57
-90
-123
-156
-189
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL SLEXG
FILTER CH CLASS 60
PEAK DATA 0.80 G @ 131.12 MS, -17.35 G @ 52.08 MS


C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
SLED ACCELERATION - BACKUP
FMVSS 208 SLED TEST
IRC NUMBER: S030110F
TEST NUMBER: S030110
10
-23
-56
-89
-122
-155
-188
ACCELERATION (G X 10-1)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: SLDXCR
FILTER: CH CLASS 60
PEAK DATA: 0.99 G @ 131.04 MS, -17.43 G @ 51.92 MS

D32231 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
SLED ACCELERATION FOR TIMING CIRCUIT
FMVSS 208 SLED TEST



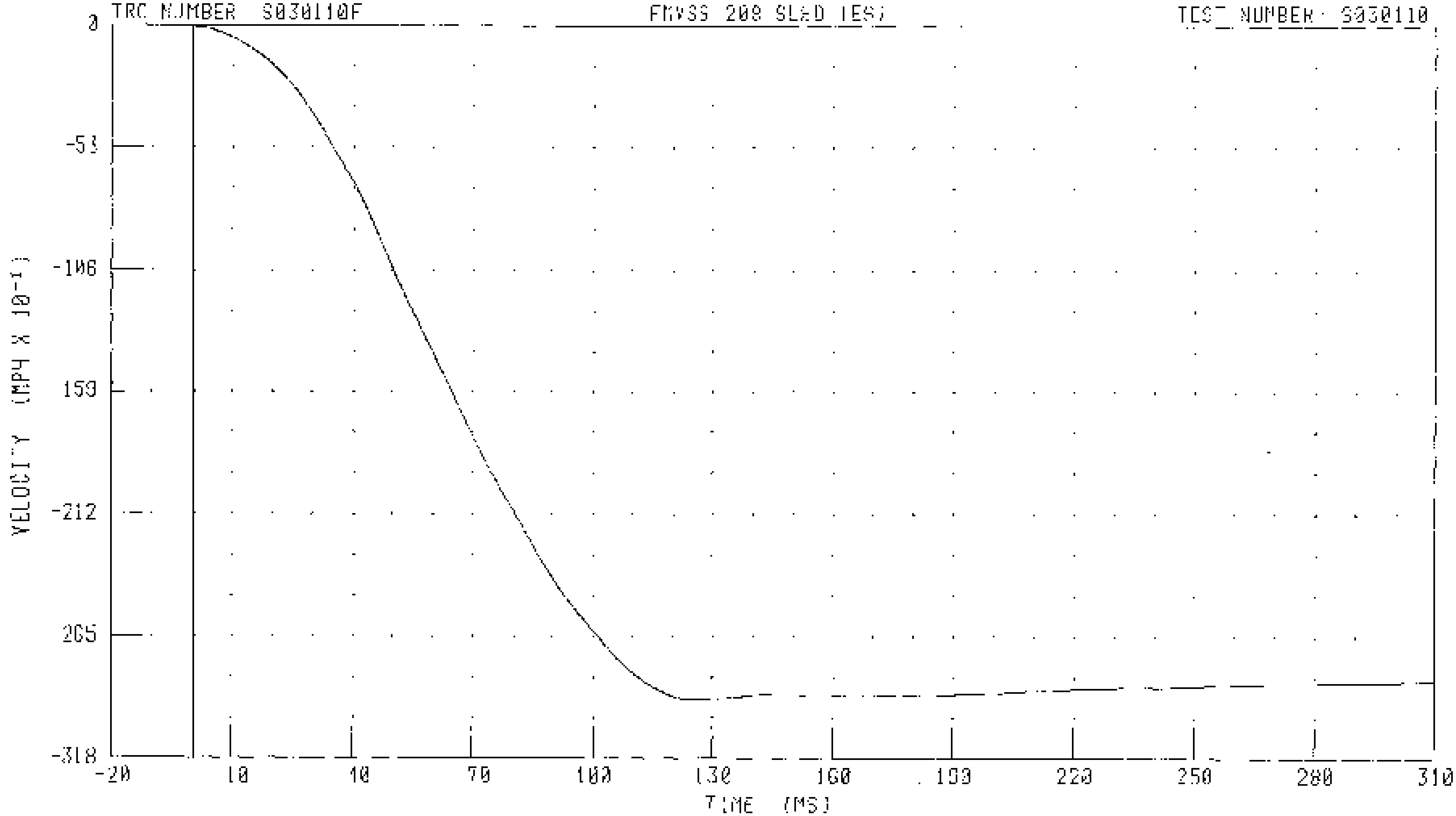
CJ0201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
MEASURED VELOCITY TRAP



CHANNEL SLOXV FILTER CH CLASS 60

PEAK DATA: 0.05 MPH @ 3.20 MS, -28.97 MPH @ 127.52 MS

030201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
SLED VELOCITY (INTEGRATED)
FMVSS 208 SLED TEST



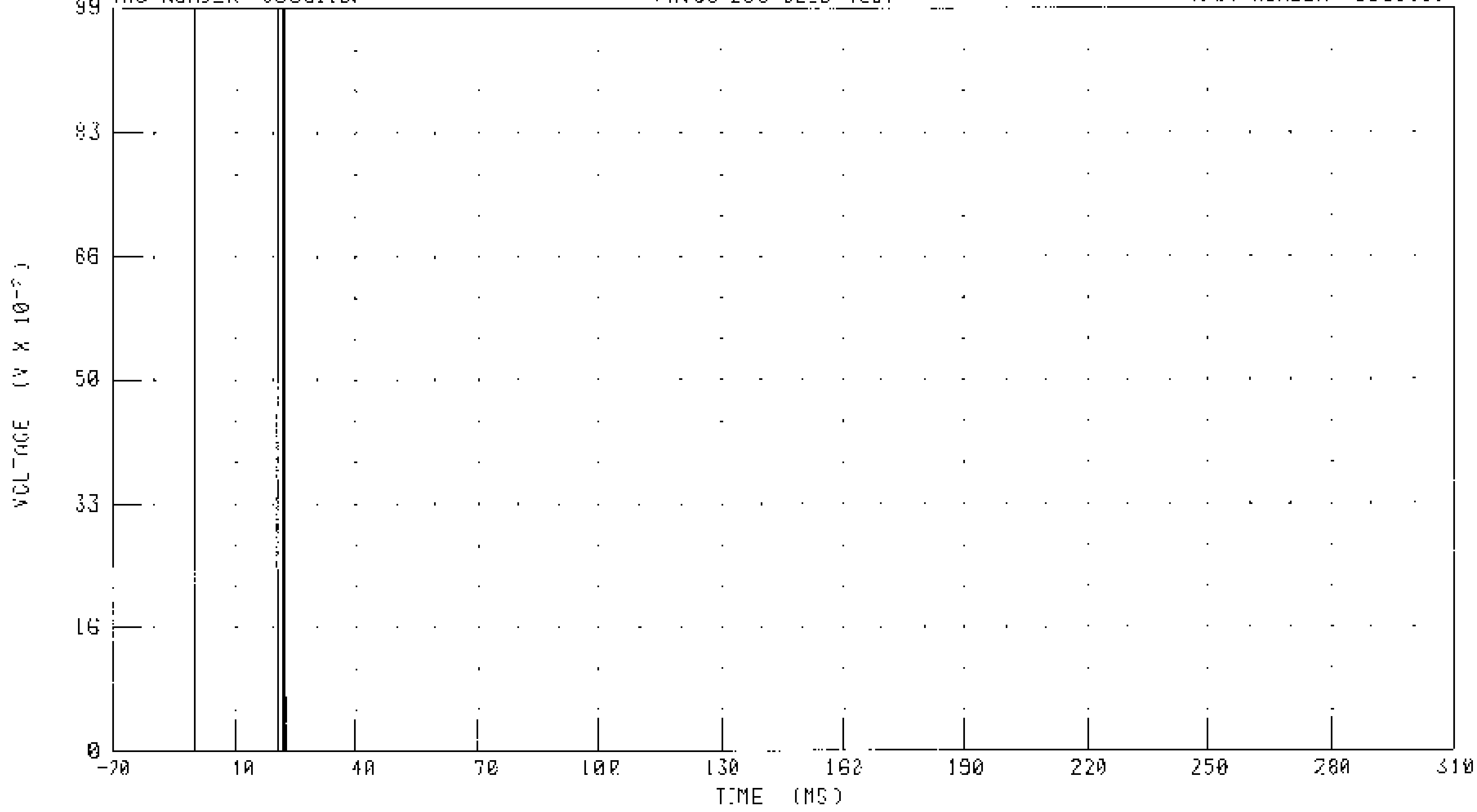
CHANNEL SLDXV1 FILTER: CH CLASS 180

PEAK DATA: 0.00 MPH @ -19.20 MS; -28.25 MPH @ 125.84 MS

C30221 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER AIRBAG EVENT
FMVSS 208 SLED TEST

TRC NUMBER S030110F

TEST NUMBER S030110

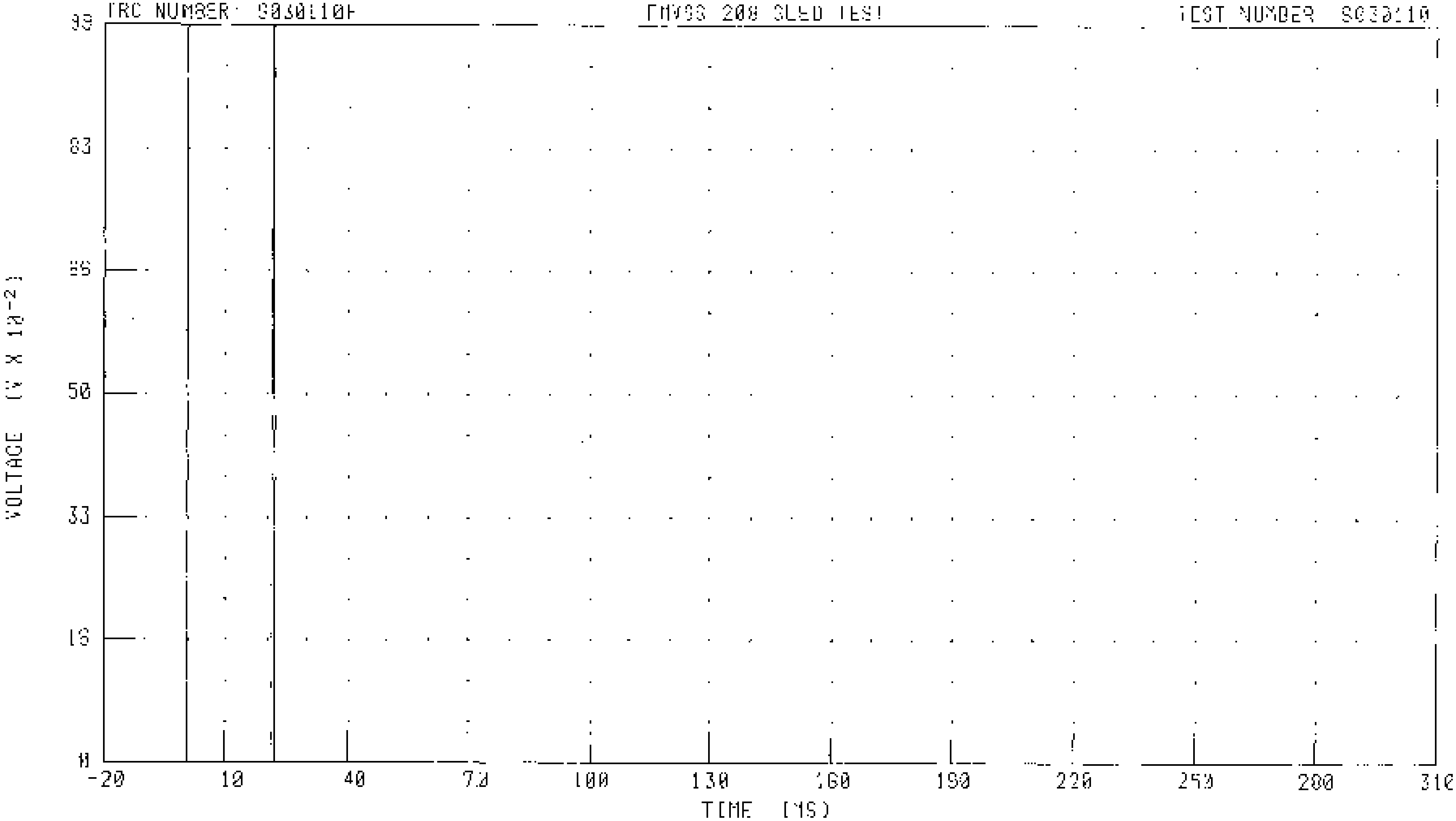


CHANNEL: DABET1 FILTER: CH. CLASS 1000

PEAK DATA: 1.00 V @ 21.28 MS, 0.00 V @ -20.00 MS

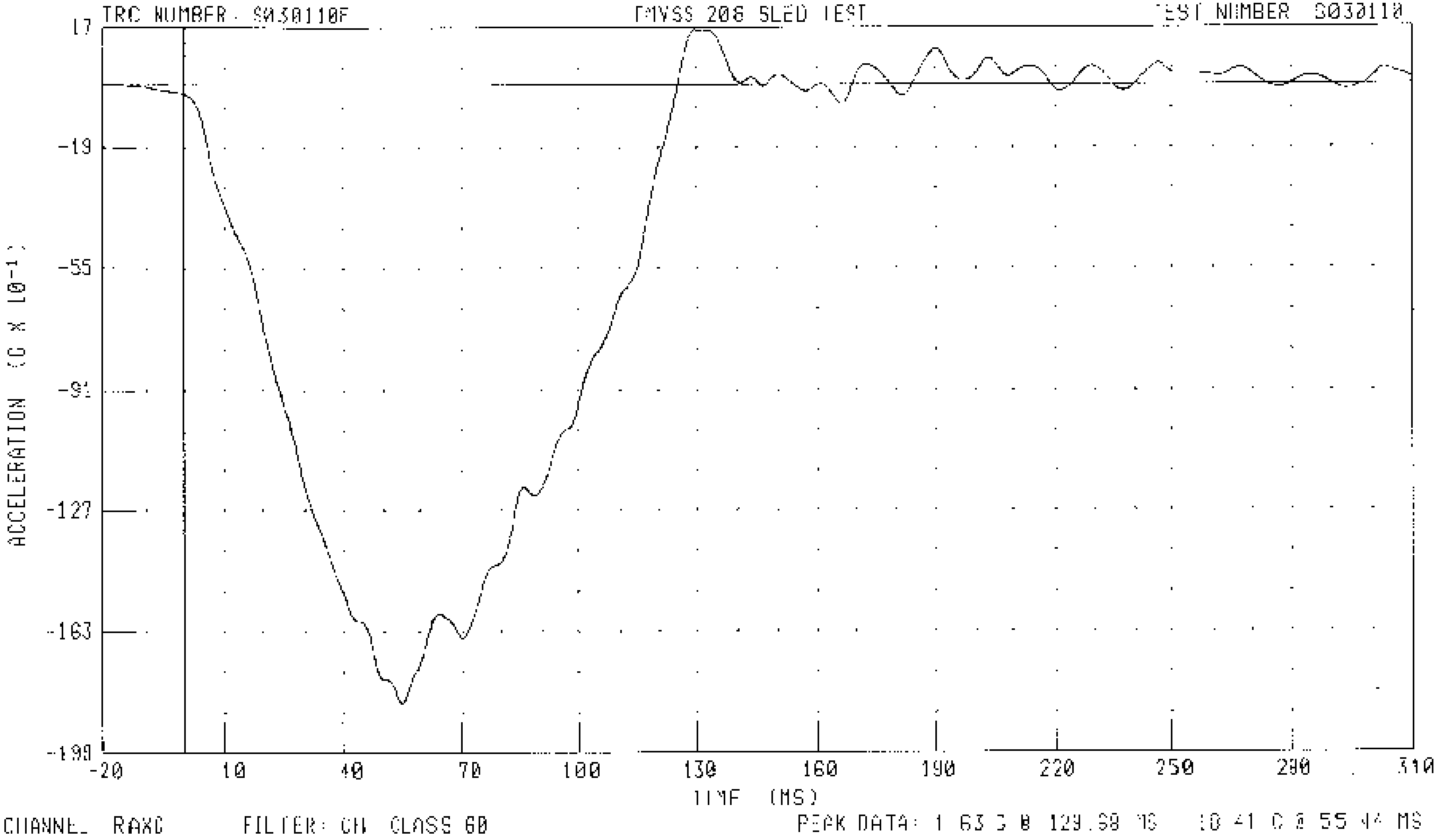
B C

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
PASSENGER AIRBAG EVENT
FMVSS 208 SLED TEST

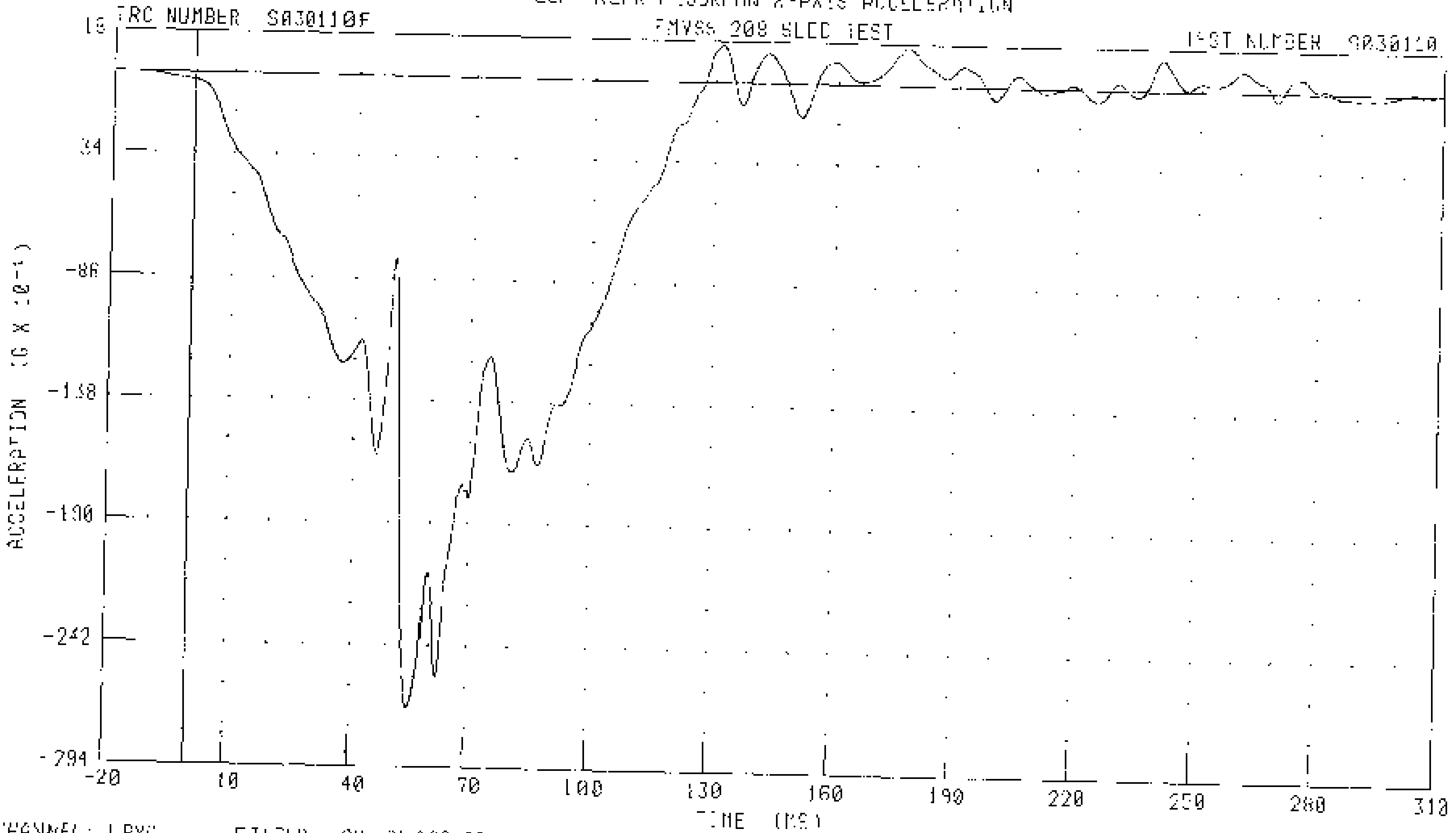


CHANNEL PABET1 FILTER CH. CLASS 1000 PEAK DATA 1.00 V @ 21.28 MS, 0.00 V @ 20.20 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
REAR AXLE X AXIS ACCELERATION
FMVSS 208 SLED TEST



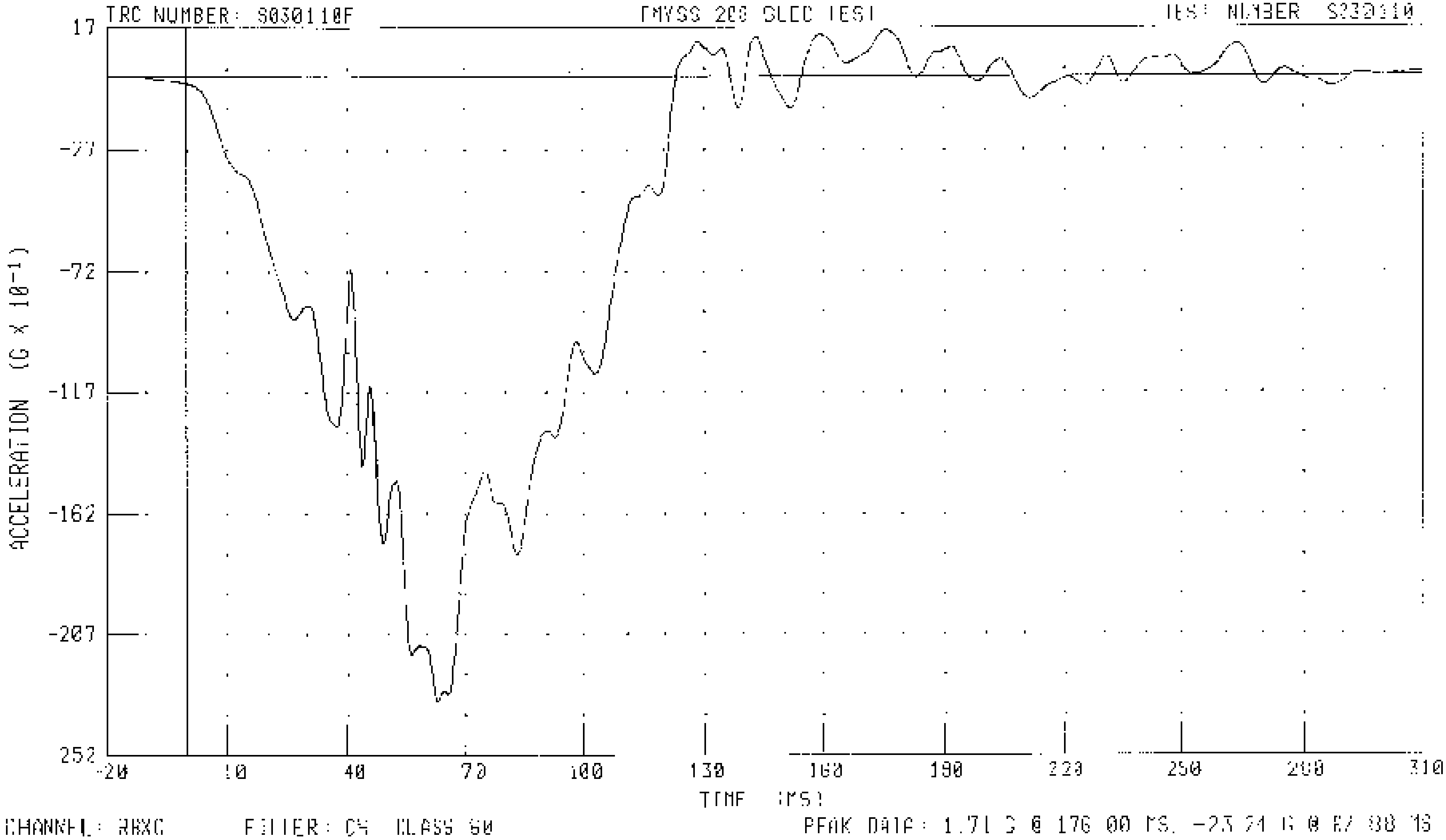
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
LEFT REAR FLOORPAN X-AXIS ACCELERATION
FMVSS 208 SLED TEST



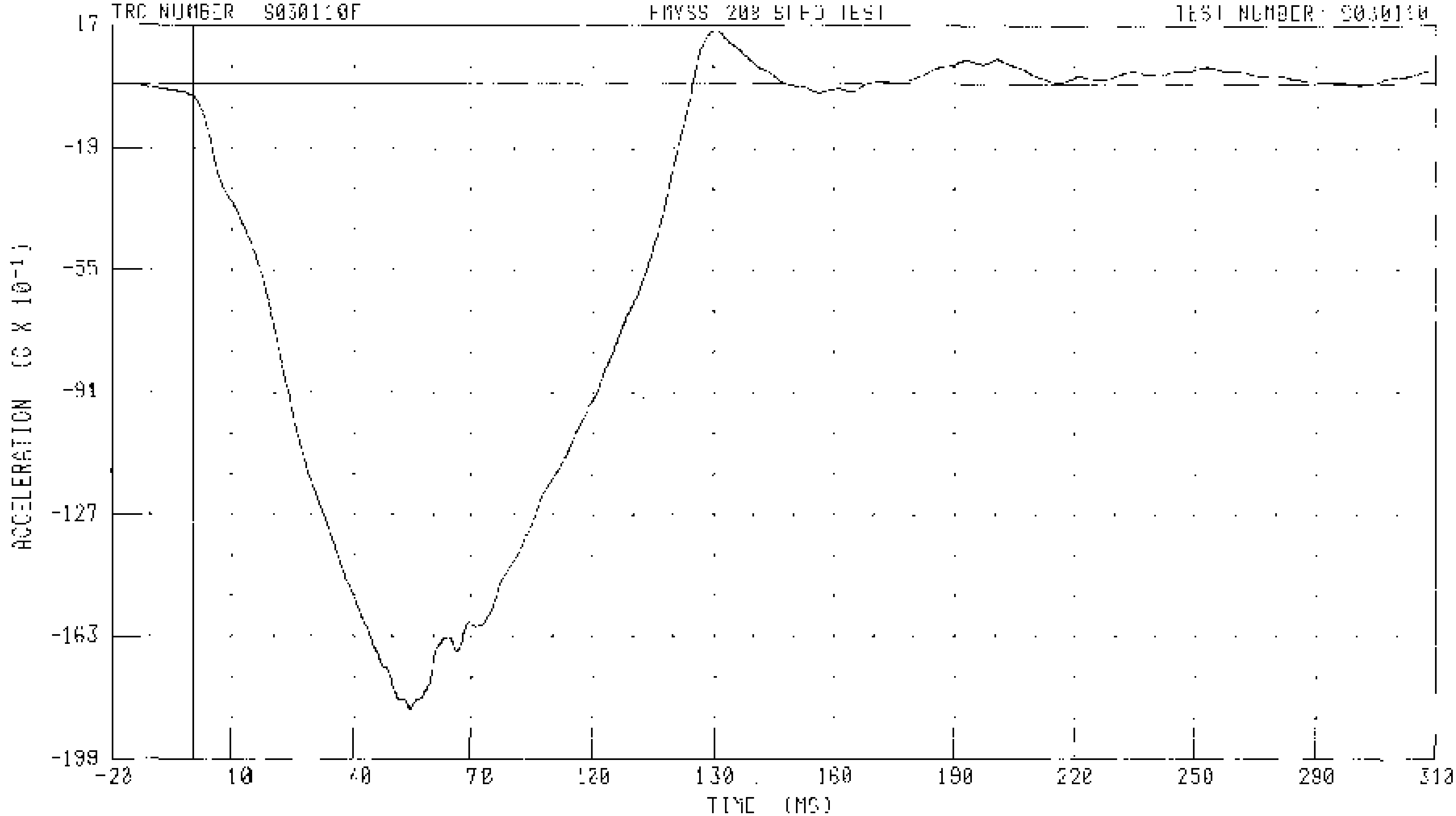
CHANNEL: LBXG FILTER: CH. CLASS 60

PEAK DATA 1.64 G @ 131.60 MS, -28.98 G @ 50.00 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT REAR FLOORPAN X-AXIS ACCELERATION



C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
LEFT VEHICLE FRAME X-AXIS ACCELERATION

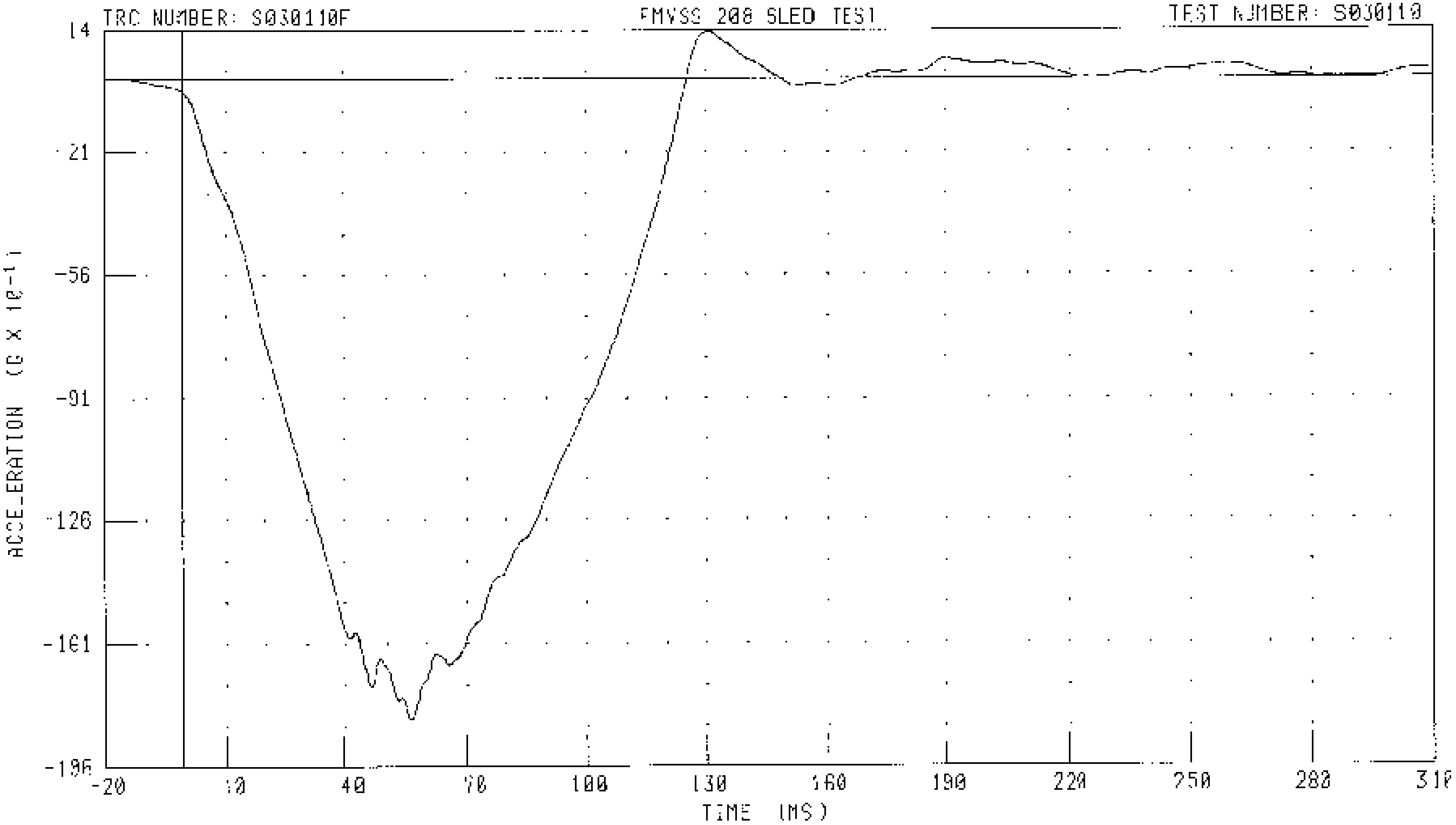


CHANNEL: LFXG FILTER: CH. CLASS 60 PEAK DATA 1.56 G @ 130.64 MS, -18.43 G @ 54.24 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT VEHICLE FRAME X-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER: S030110F

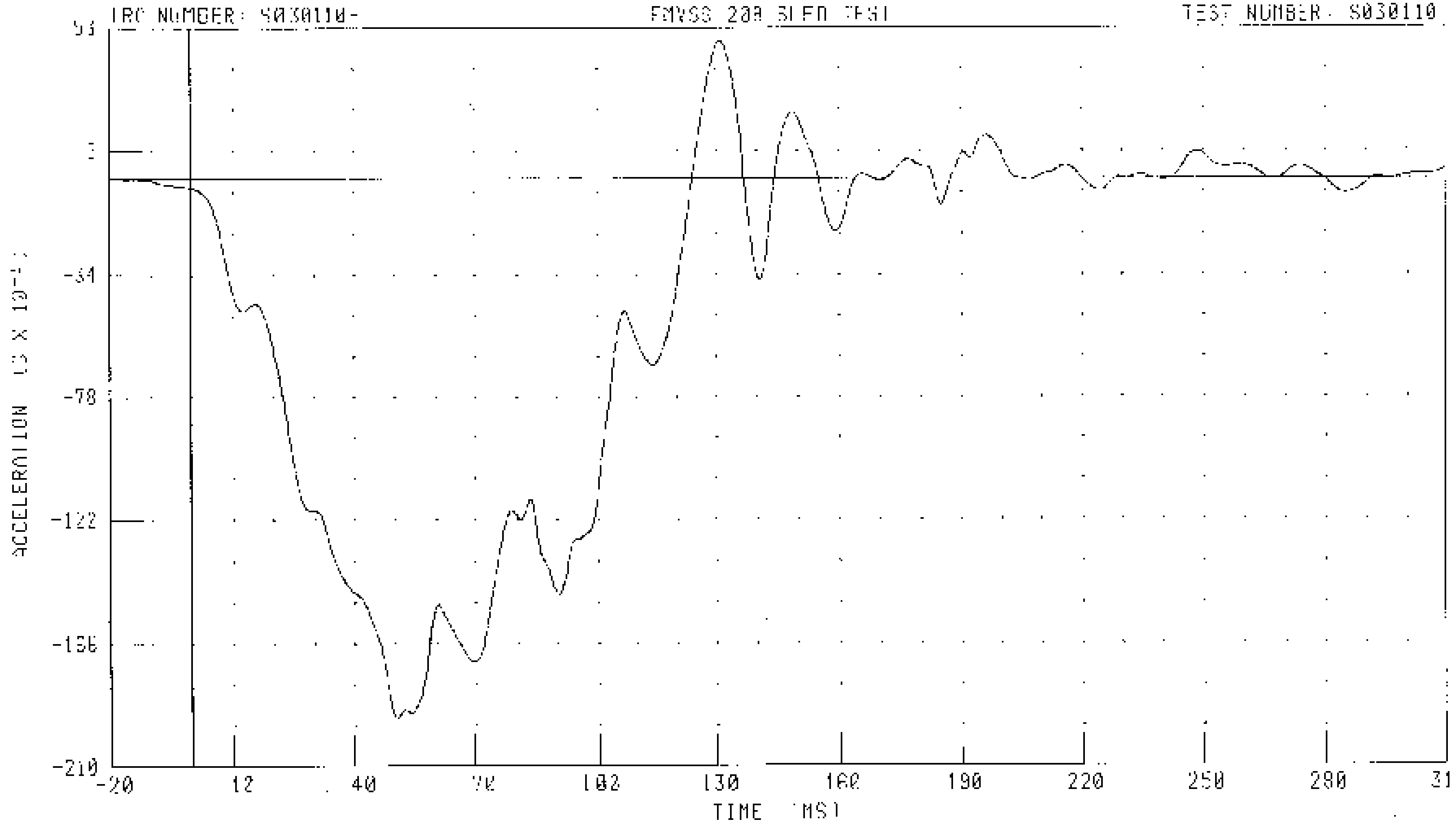
TEST NUMBER: S030110



CHANNEL: RFXG FILTER CH CLASS 60

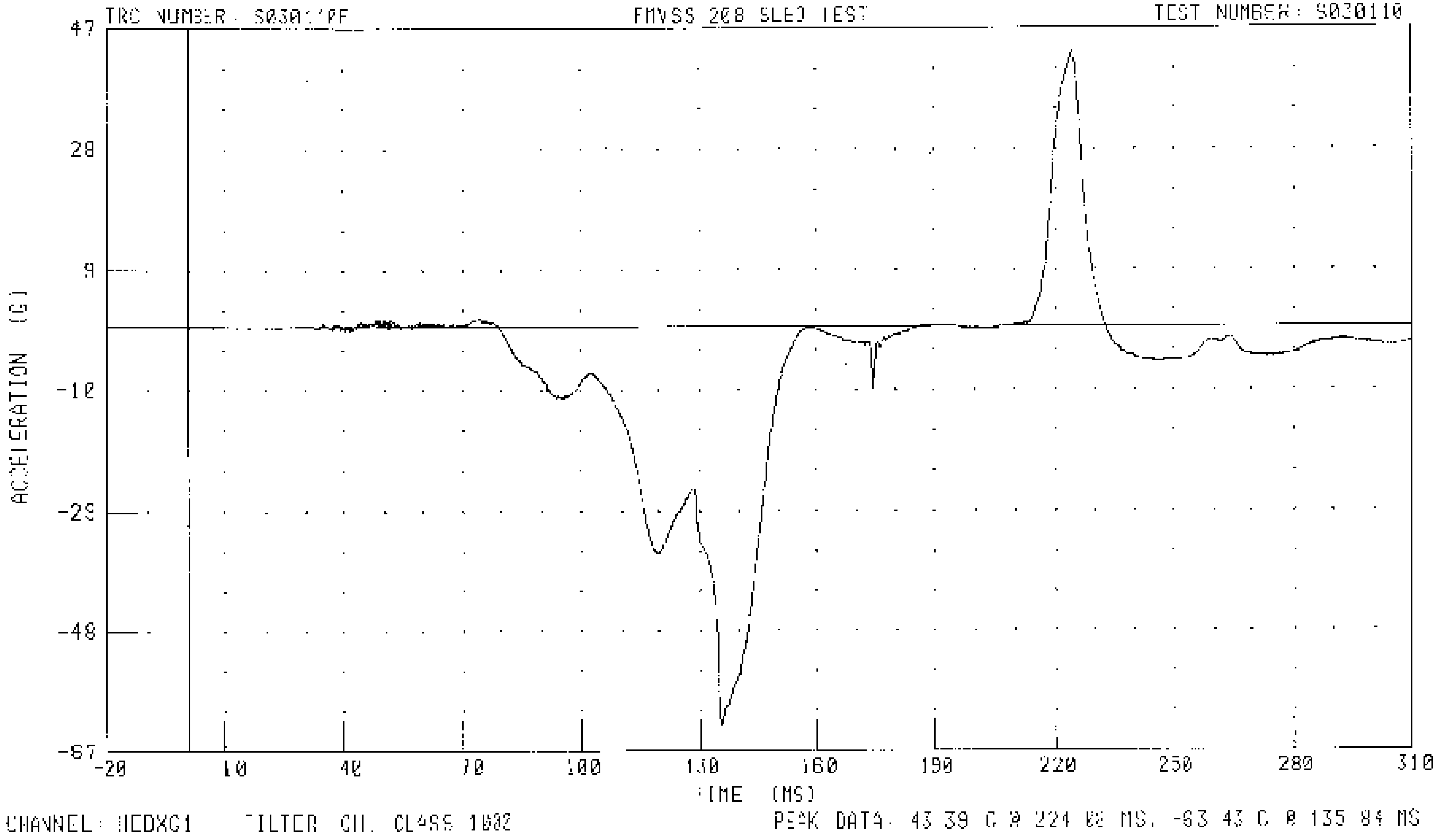
PEAK DATA : 1.36 G @ 130.80 MS; -18.23 G @ 56.15 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
TOP ENGINE X-AXIS ACCELERATION

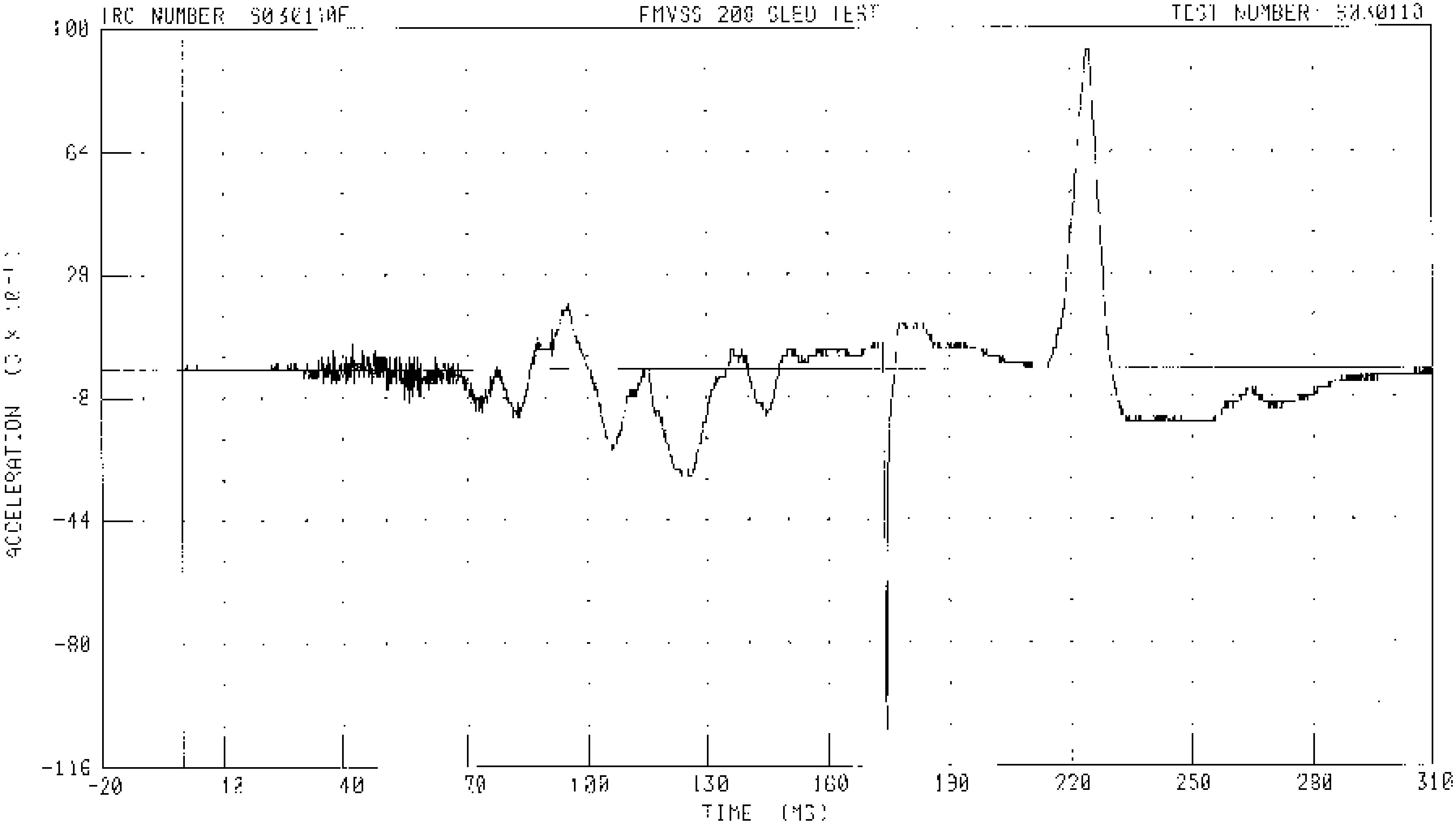


CHANNEL: TEXG FILTER: CH CLASS 60 PEAK DATA 4.93 G @ 131.20 MS; -19.27 G @ 50.56 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER HEAD X AXIS ACCELERATION



C32201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER HEAD Y-AXIS ACCELERATION
FMVSS 208 SLED TEST



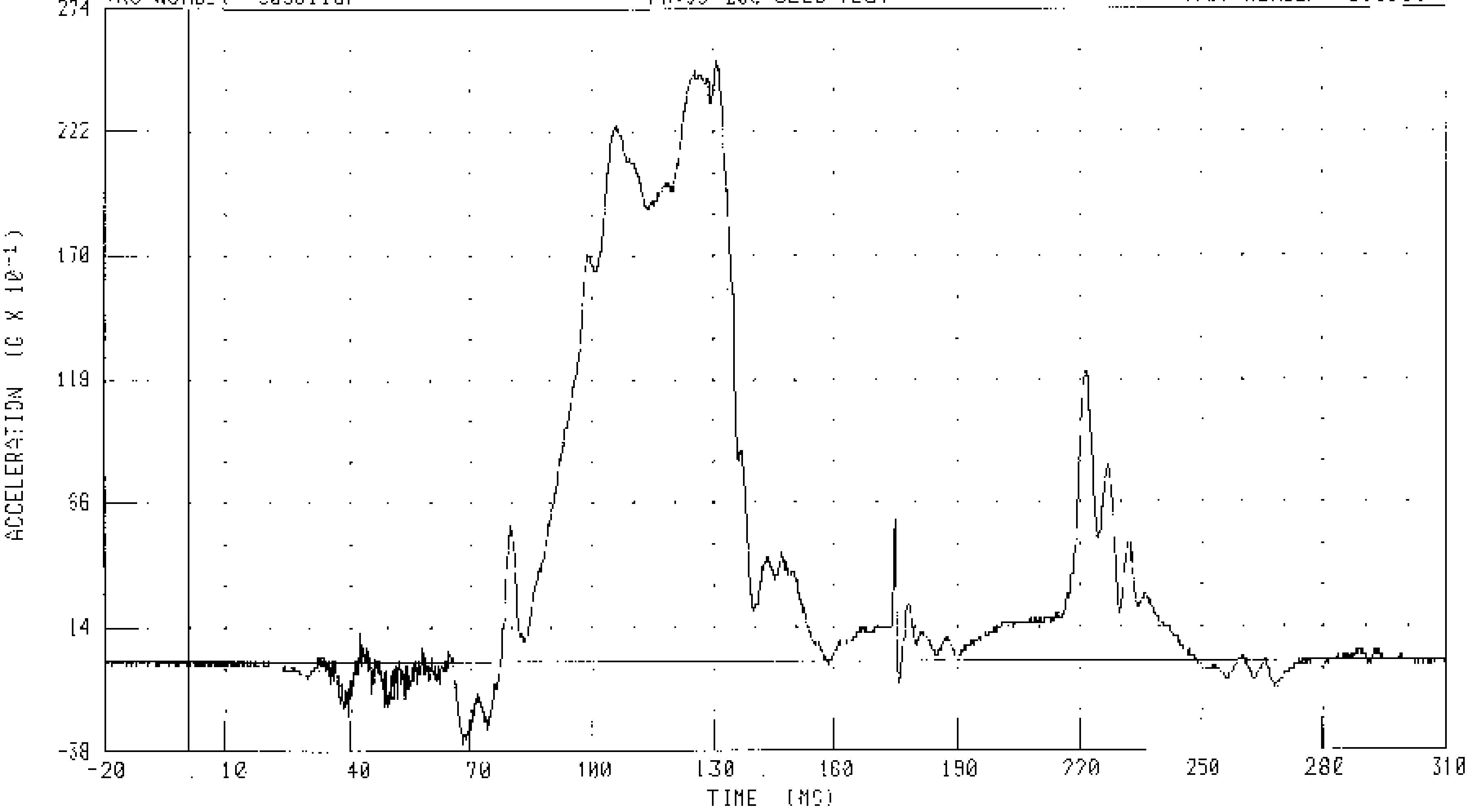
CHANNEL: HEDYG1   FILTER: CF CLASS 1000

PEAK DATA: 9.35 G @ 224.08 MS, -10.52 G @ 174.56 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

DRIVER HEAD Z-AXIS ACCELERATION

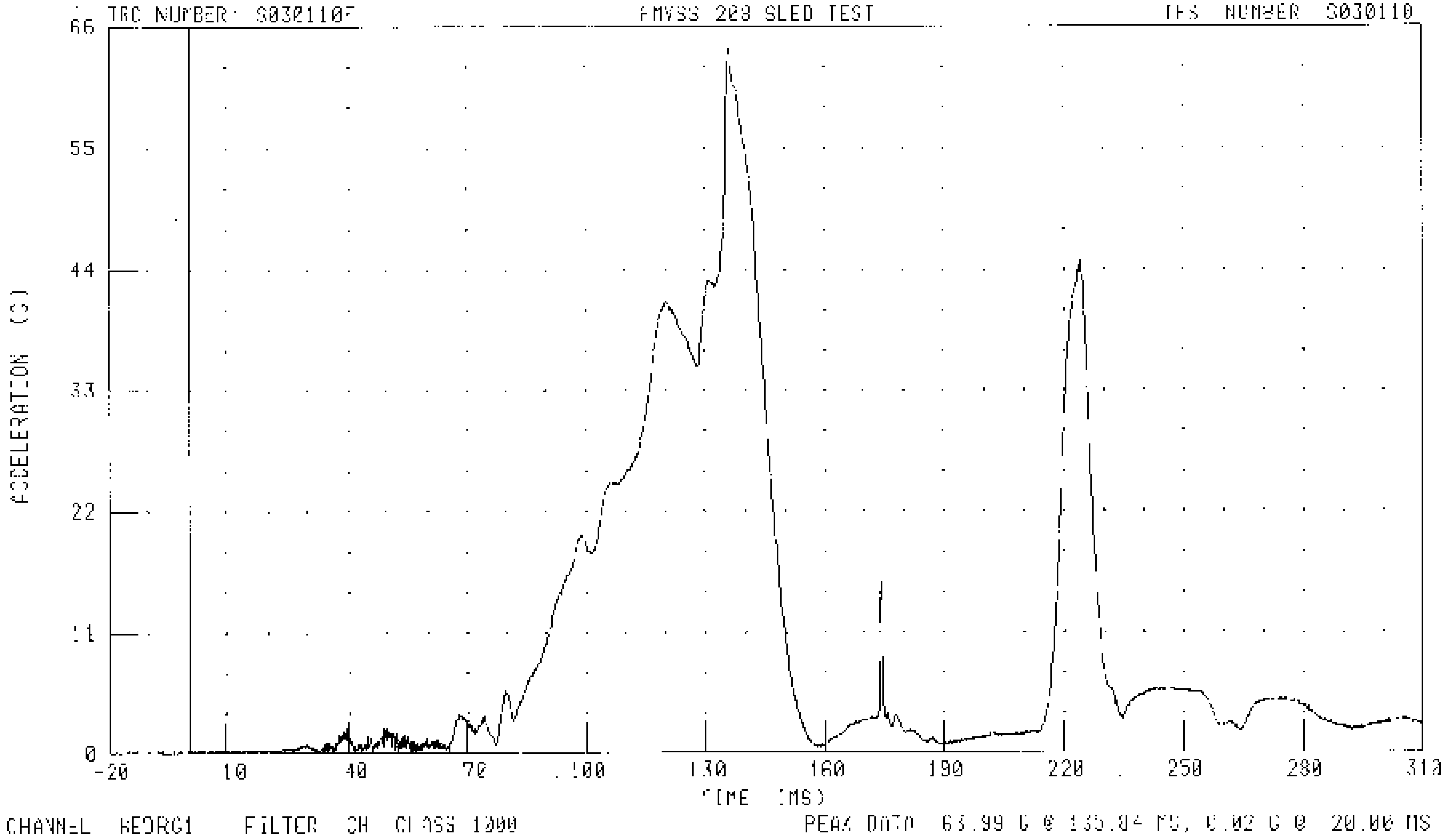
TRC NUMBER : S030110F FMVSS 208 SLED TEST TEST NUMBER : S030110



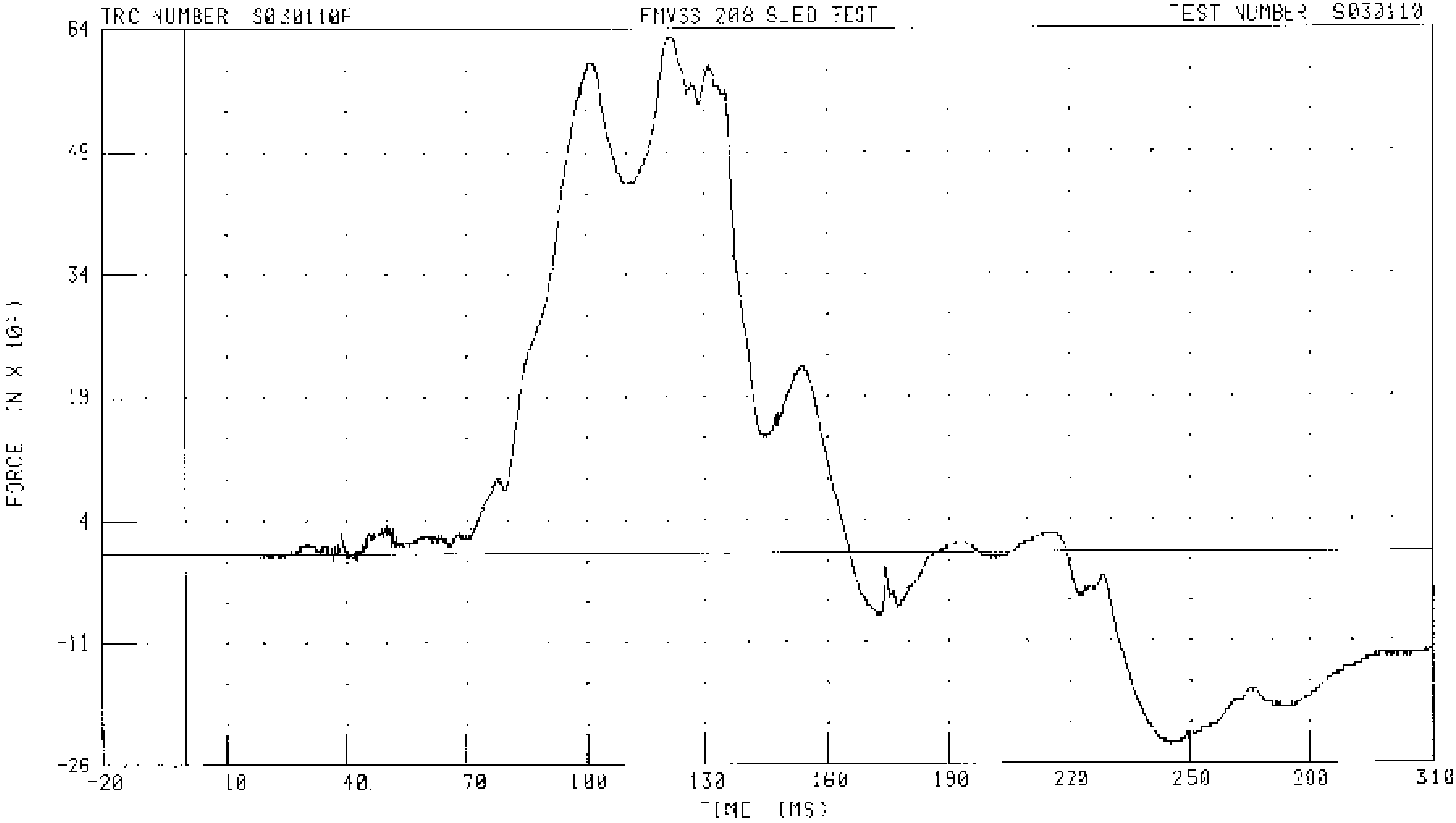
CHANNEL : HF0ZG1 FILTER CH CLASS 1000

PEAK DATA : 25.18 G @ 130.30 MS; -3.49 G @ 68.00 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER HEAD RESULTANT ACCELERATION
FMVSS 208 SLED TEST



030201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK X AXIS SHEAR FORCE
FMVSS 208 SLED TEST

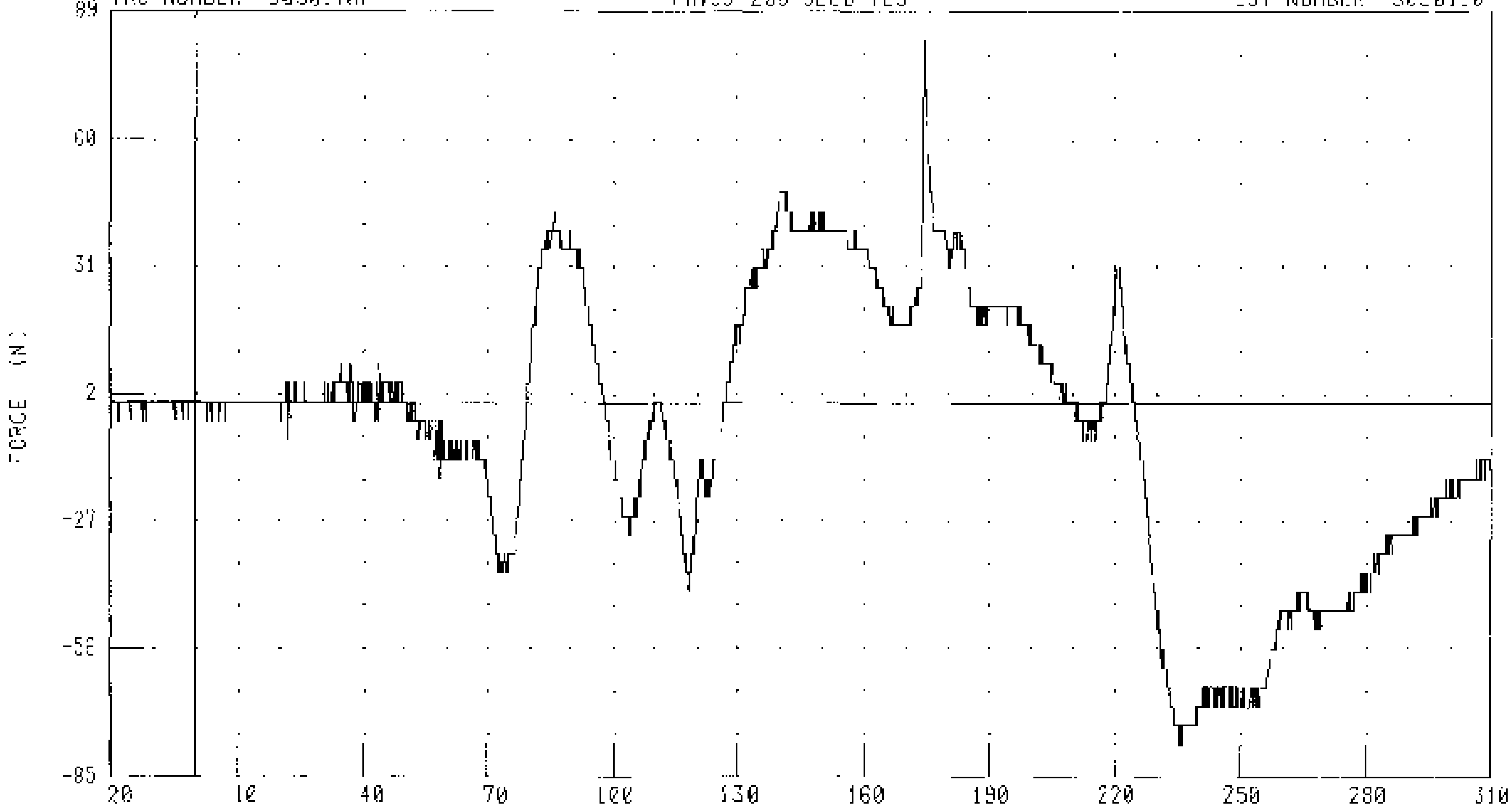


CHANNEL: NEKXF1 FILTER: CH. CLASS 1000

PEAK DATA: 630.41 N @ 120.16 MS; -239.10 N @ 245.36 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK Y AXIS SHEAR FORCE

TRC NUMBER S030110F
FMVSS 208 SLED TEST
TEST NUMBER S030110

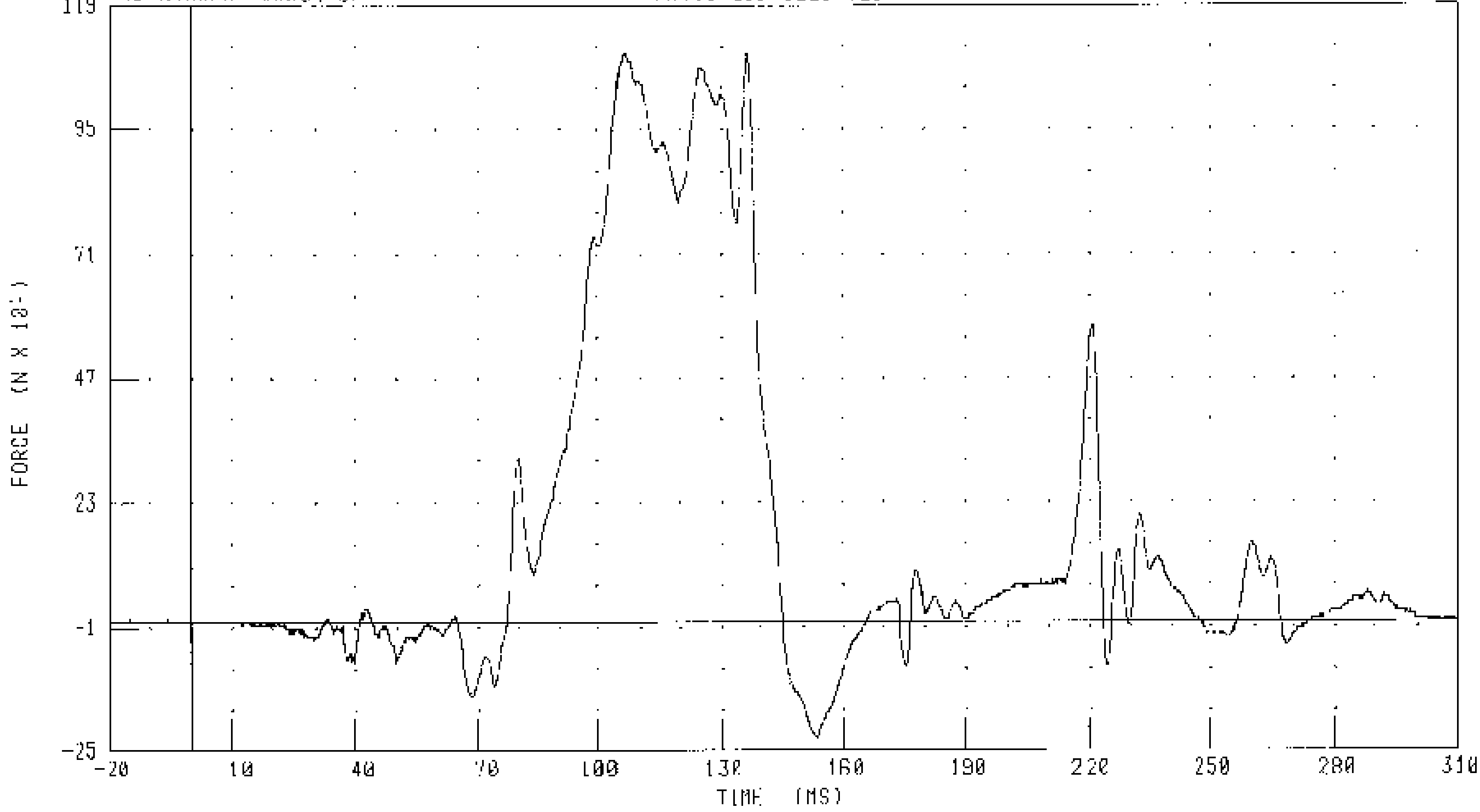


CHANNEL NEKYF1 FILTER CH. CLASS 1000
PEAK DATA: 82.71 N @ 174.64 MS; 77.92 N @ 235.20 MS

C30221 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK Z-AXIS AXIAL FORCE
FMVSS 208 SLED TEST

TRC NUMBER: S030110F

TEST NUMBER: S030110

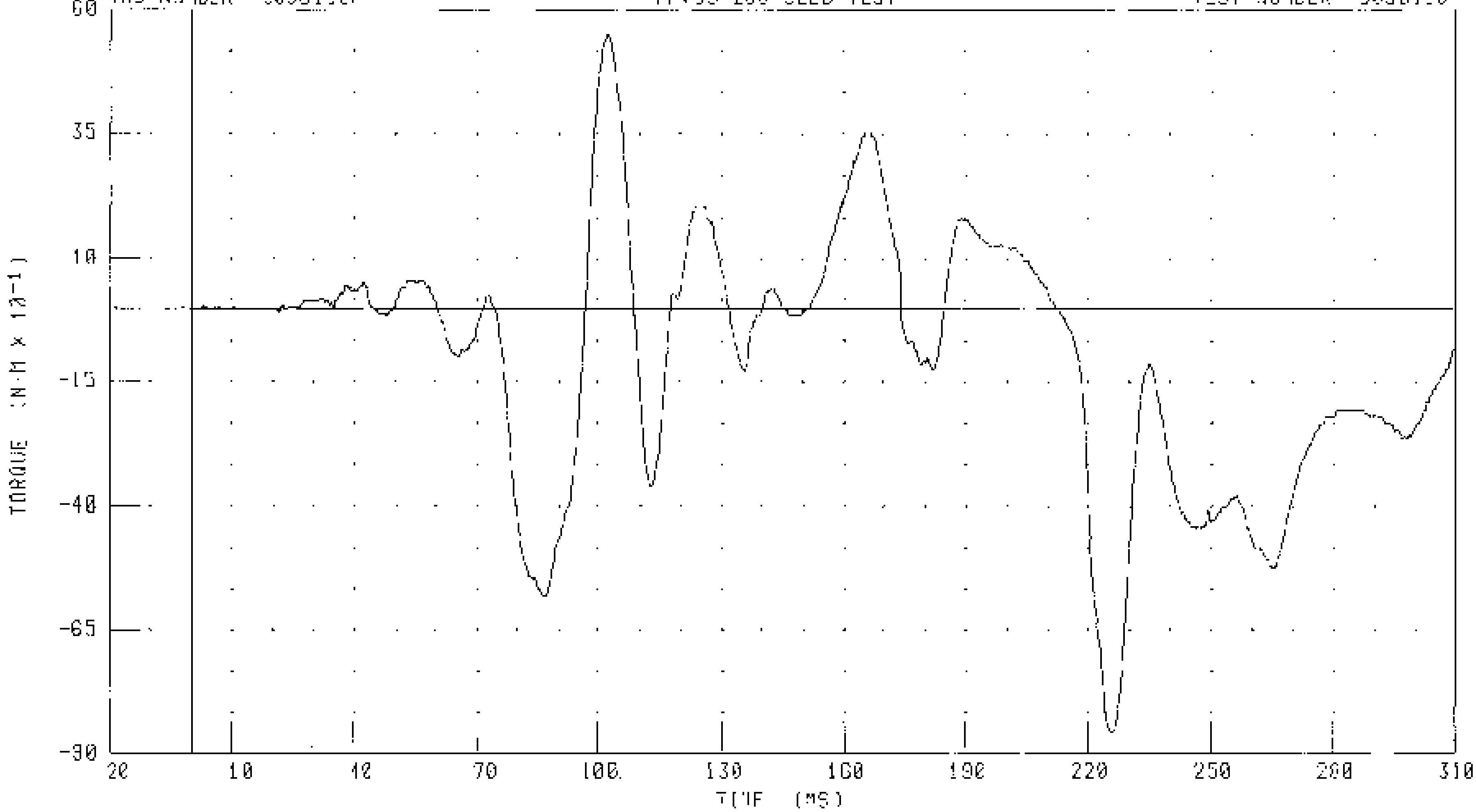


CHANNEL: NEKZF1 FILTER: CH CLASS 1000

PEAK DATA: 1094.71 N @ 106.24 MS; -228.13 N @ 153.17 MS

S30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK MOMENT ABOUT X AXIS

IRS NUMBER: S030112F
FMVSS 208 SLED TEST
TEST NUMBER S030110

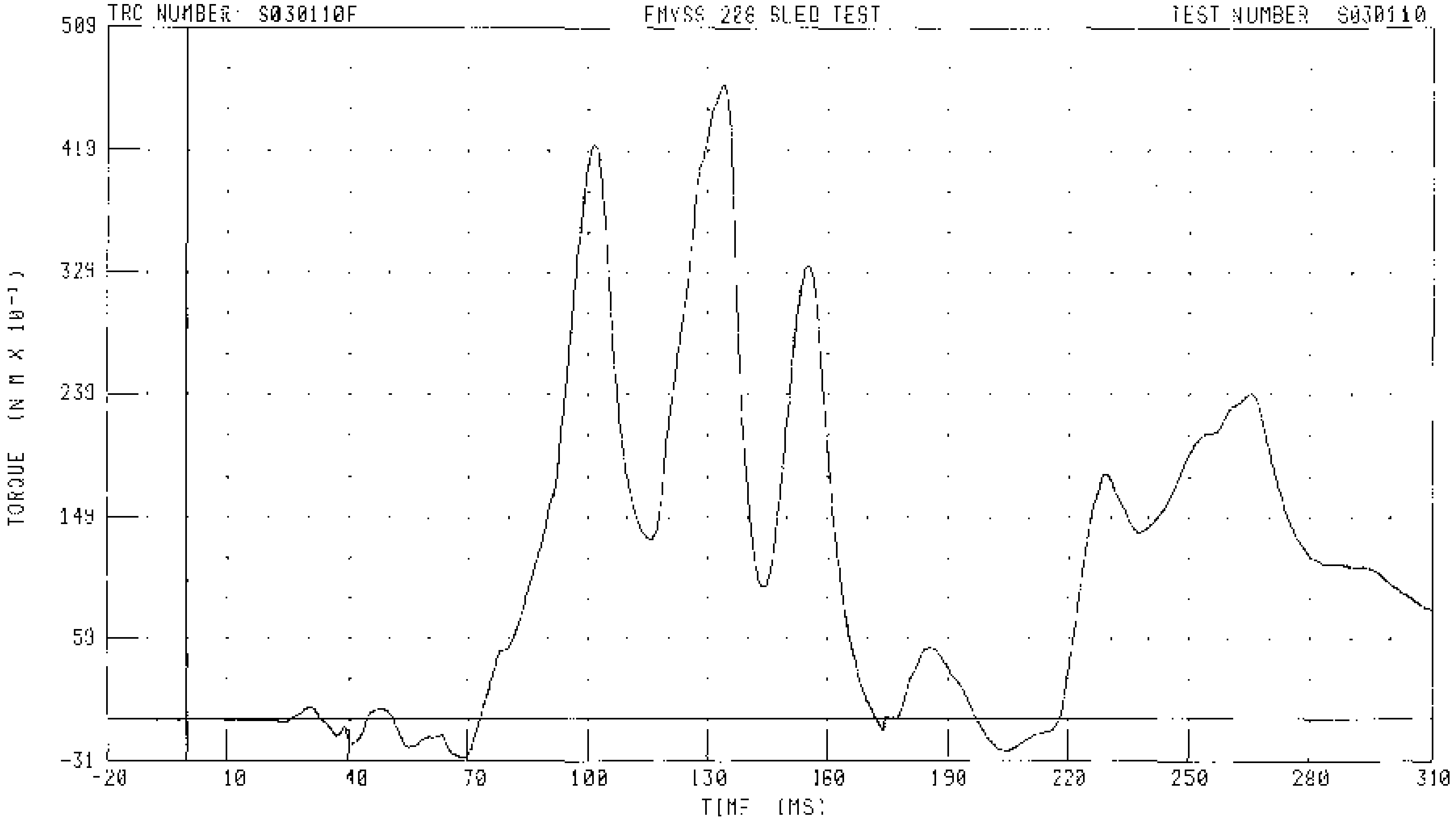


CHANNEL: NEKXM1 FILTER CH CLASS 600

PEAK DATA 5.53 N M @ 102.35 MS, 8.59 N M @ 225.60 MS

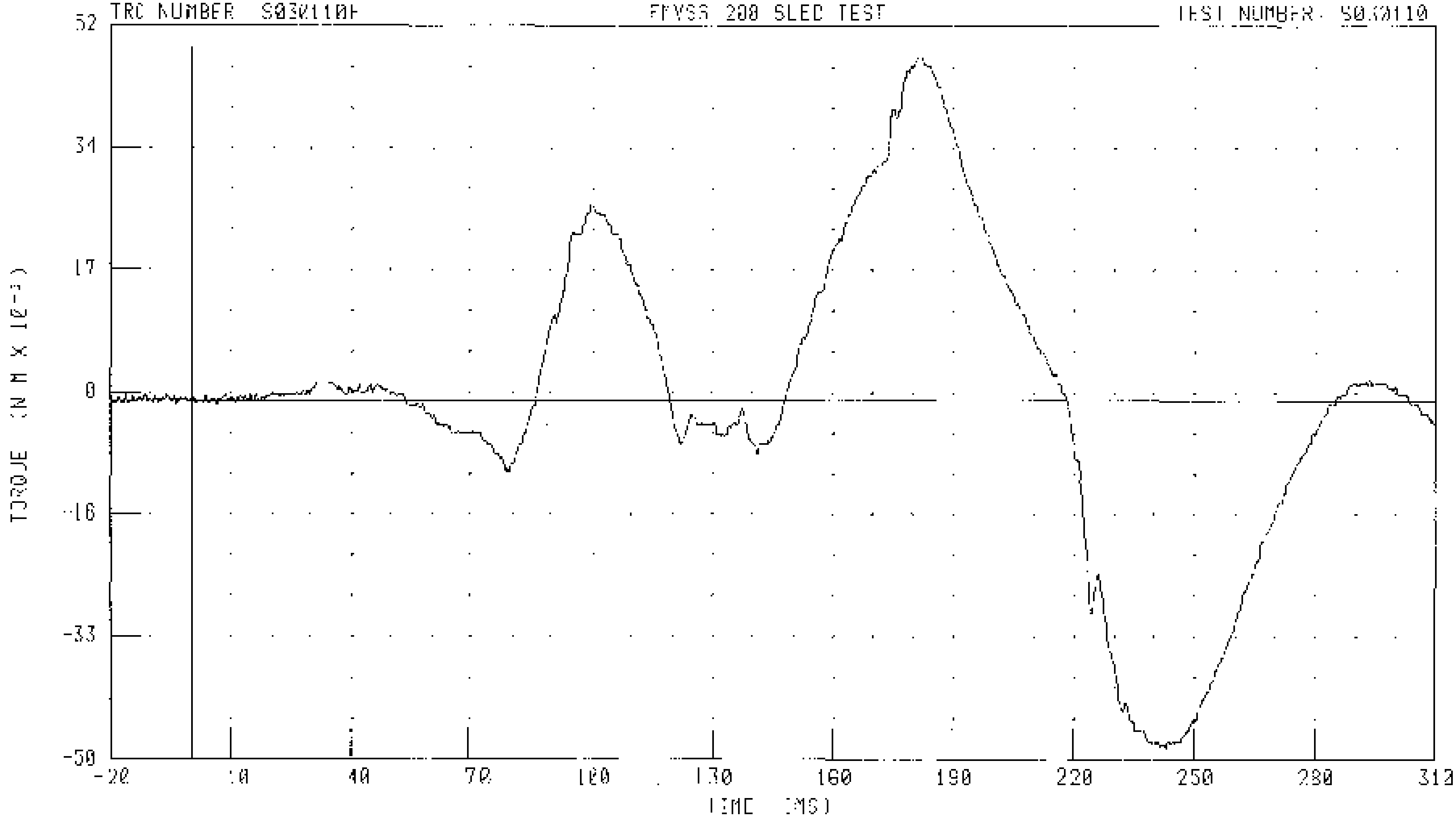
C30201 / 2003 FORD F 150 REGULAR CAB PICKUP TRUCK

DRIVER NECK MOMENT ABOUT Y AXIS



CHANNEL: NEKYMI FILTER: CW CLASS 600 PEAK DATA: 46.67 N M @ 133.97 MS; -2.89 N-M @ 69.80 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK MOMENT ABOUT Z AXIS

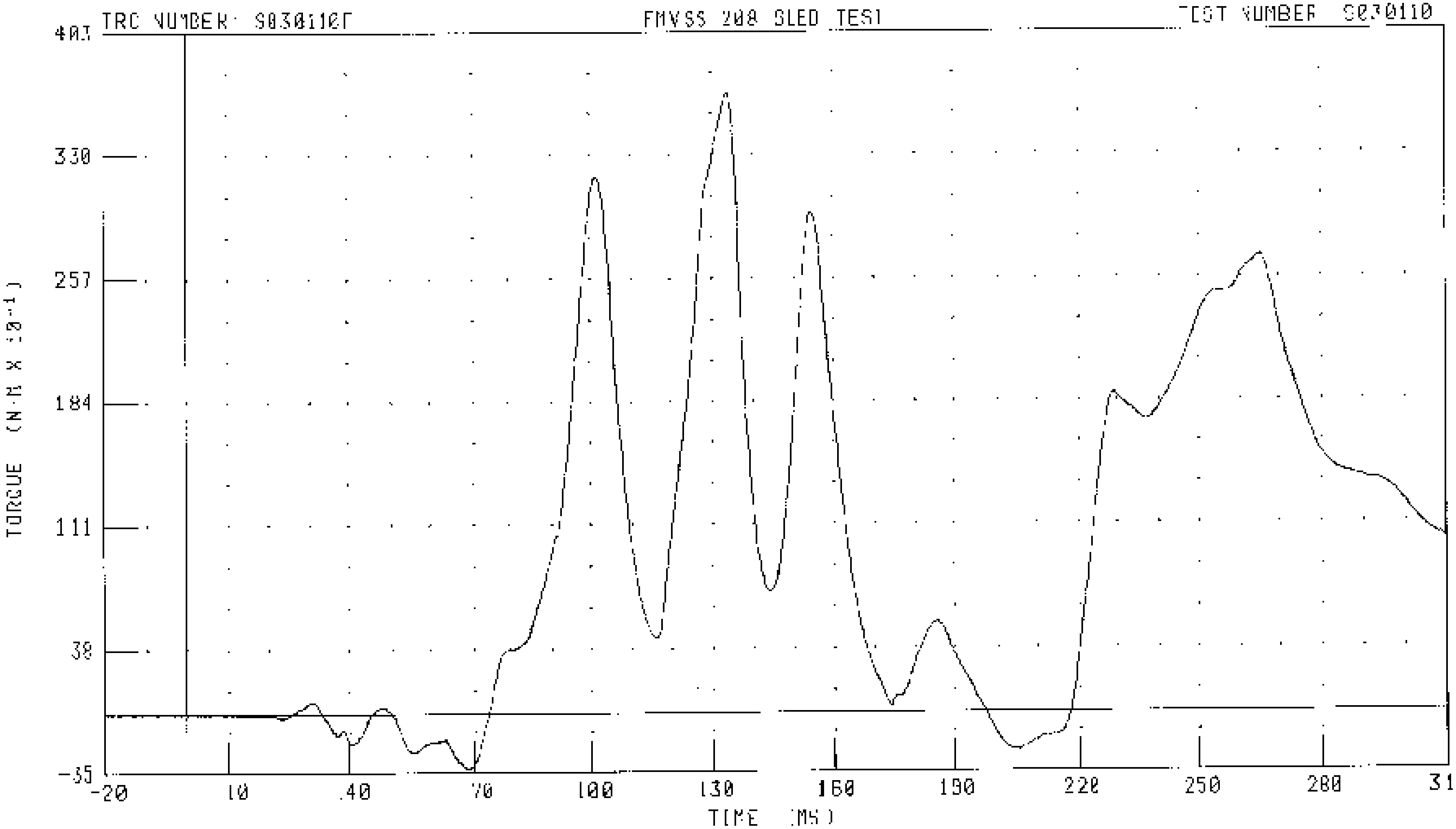


CHANNEL NCKZM1 FILTER: CF CLASS 600 PEAK DATA: 4.78 N-M @ 181.76 MS; -4.84 N-M @ 241.84 MS

C30221 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE
FMVSS 208 SLED TEST

TRC NUMBER: S030110F

TEST NUMBER S030110

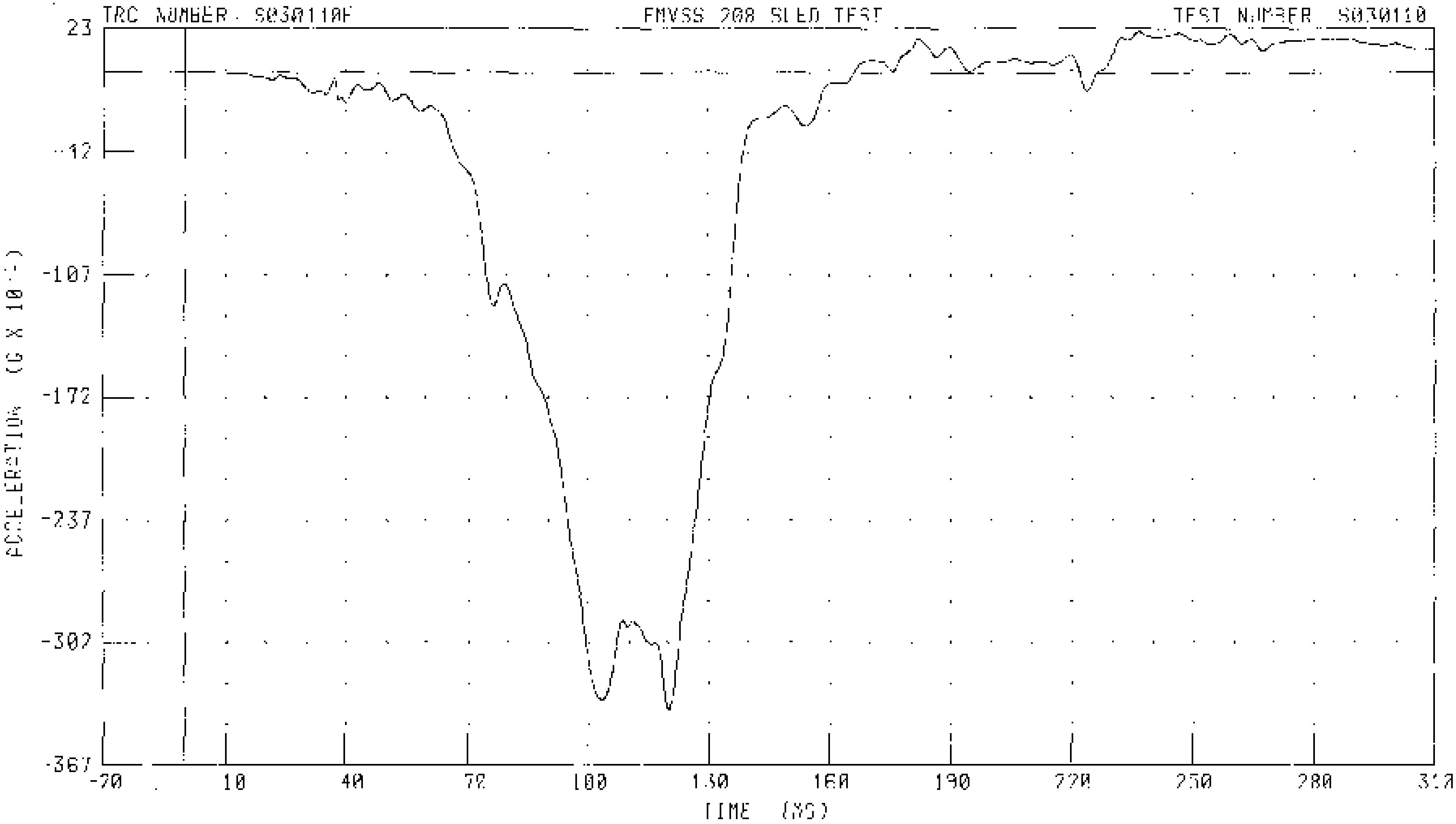


CHANNEL: NEXOM1   FILTER CFC CLASS 600

PEAK DATA 36.61 N M @ 134.08 MS; -3.27 N M @ 68.80 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

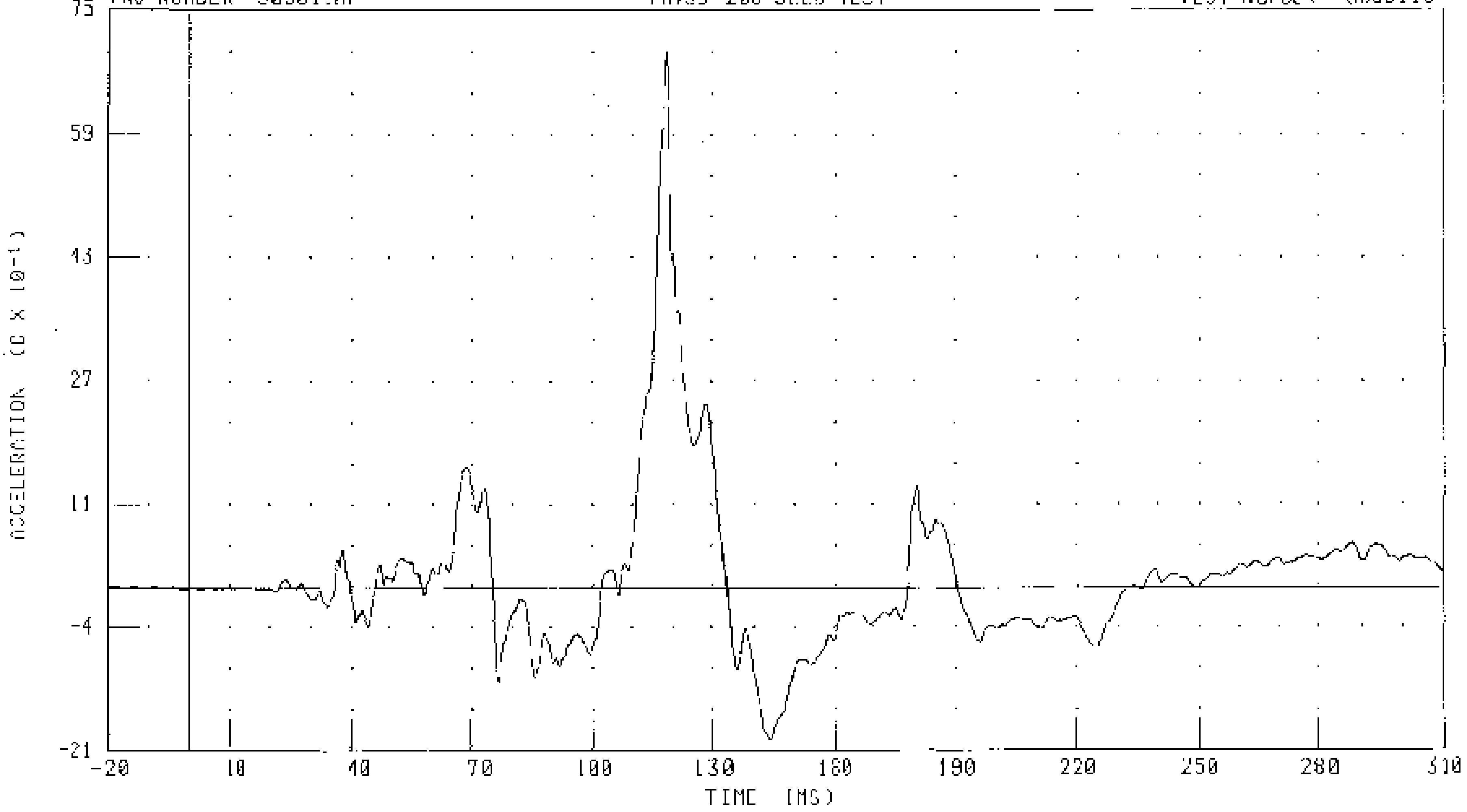
DRIVER CHEST X AXIS ACCELERATION



CHANNEL: CSIX31 FILTER: CH CLASS 130 PEAK DATA 2.13 G @ 230.90 MS, 33.70 G @ 120.40 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER CHEST Y-AXIS ACCELERATION

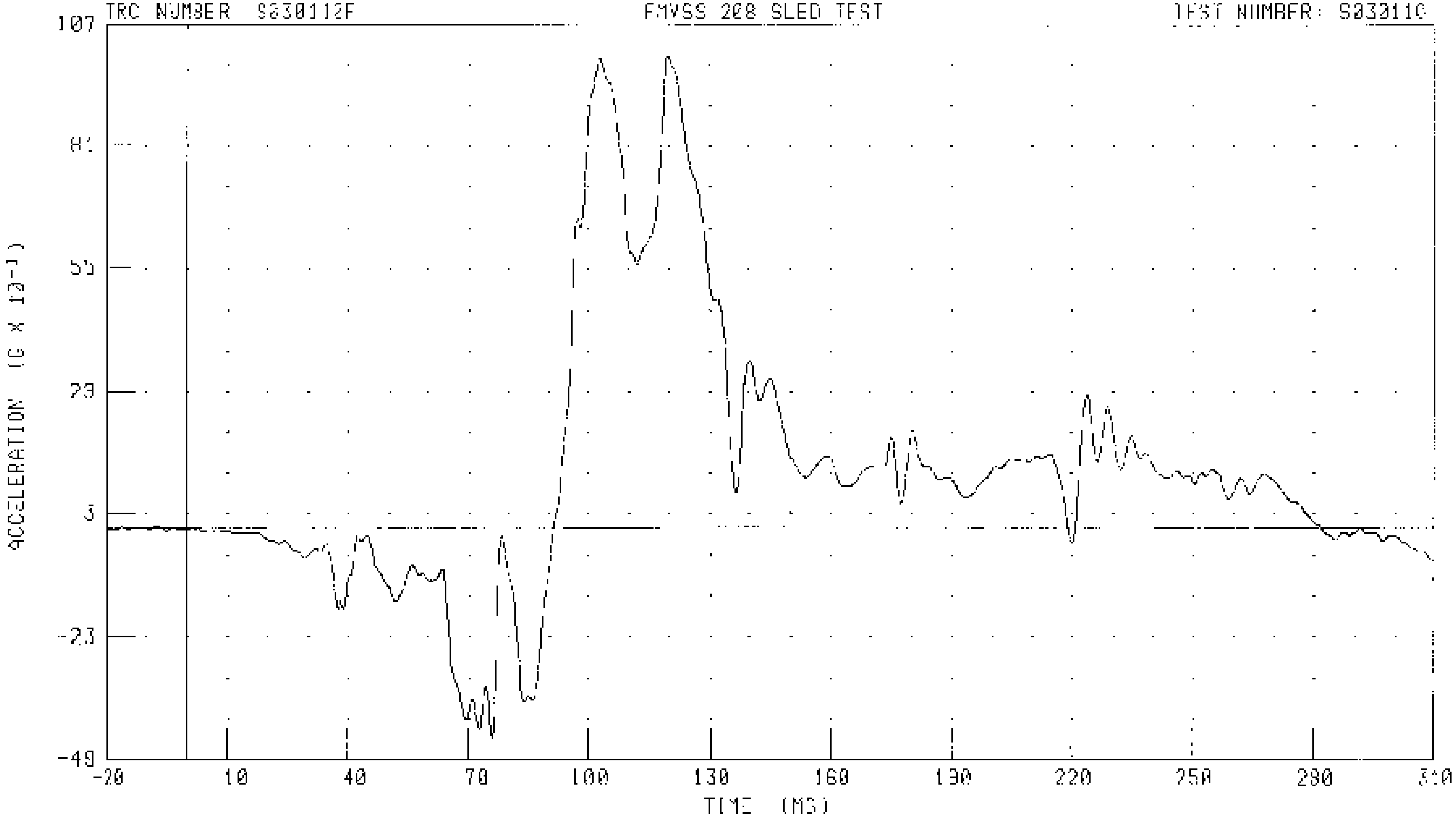
TRC NUMBER: S030110F   FMVSS 208 SLED TEST   TEST NUMBER: S030110



CHANNEL CSTYG1   FILTER C-. CLASS 180   PEAK DATA: 6.96 G @ 118.24 MS, -1.97 G @ 144.40 MS

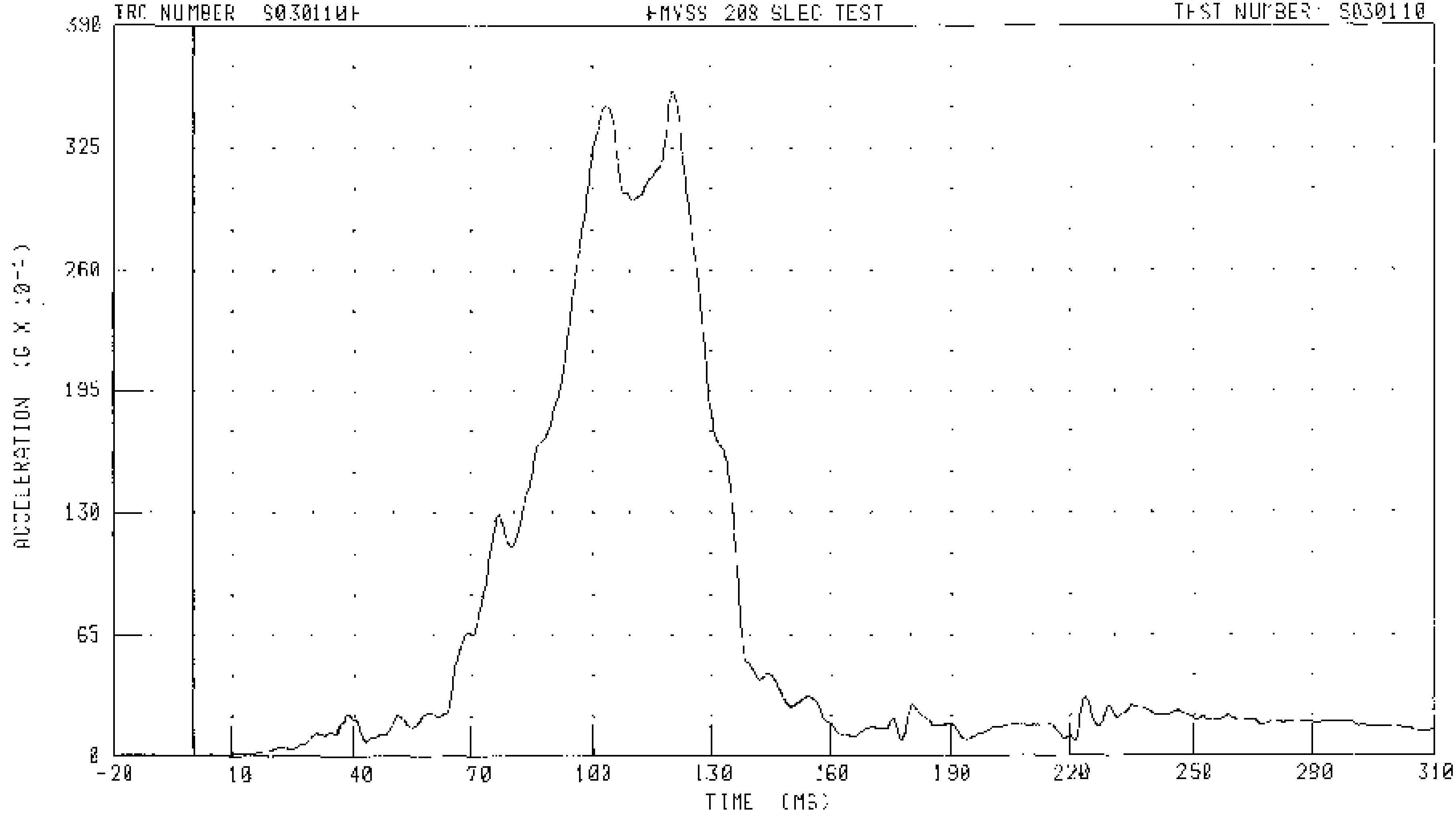
C30221 / 2003 FORD F 150 REGULAR CAB PICKUP TRUCK

DRIVER CHEST Z-AXIS ACCELERATION



CHANNEL CSTZG1 FILTER CH. CLASS 180 PEAK DATA 10.05 G @ 120.08 MS, -4.48 G @ 75.04 MS

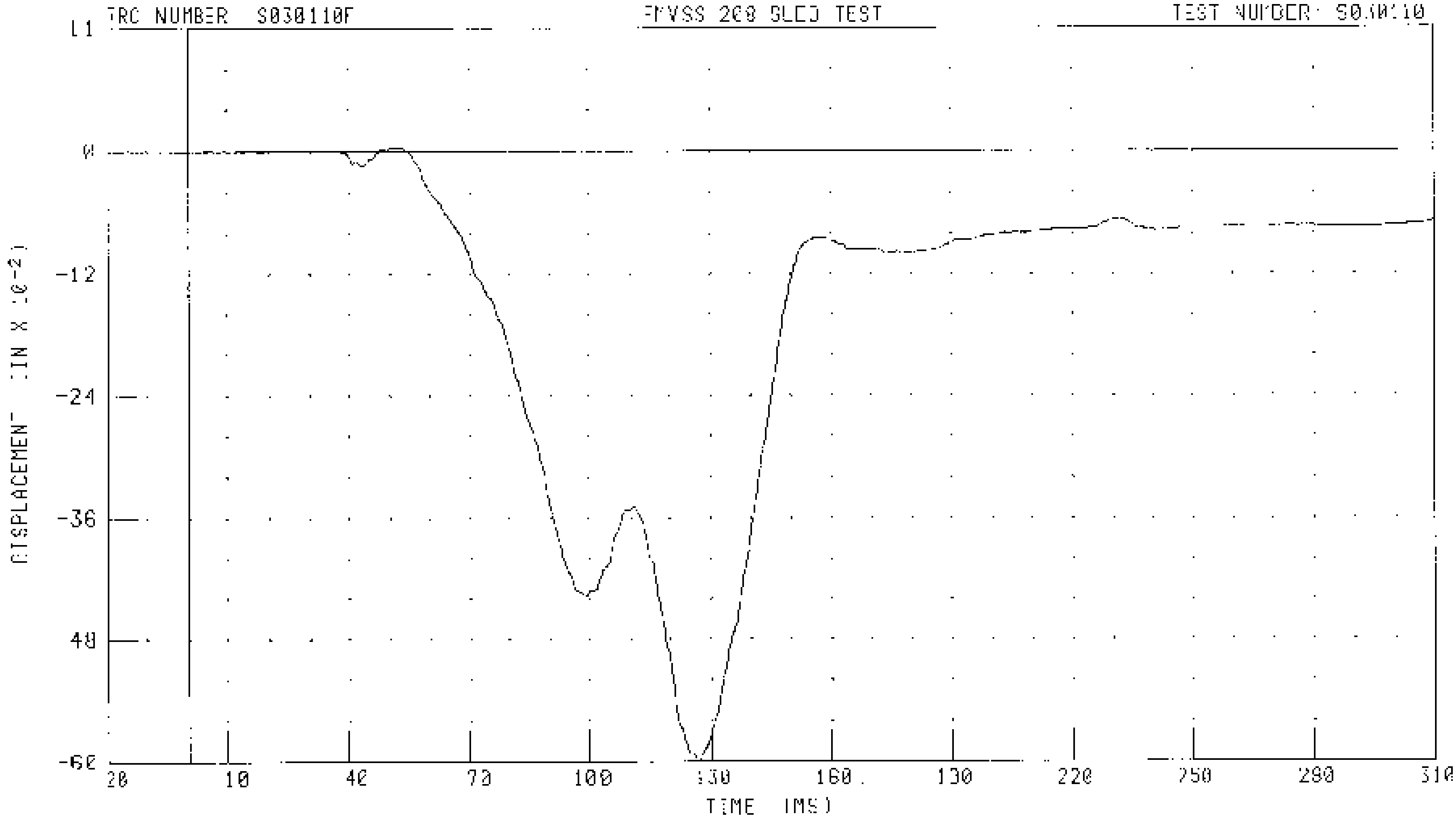
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER CHEST RESULTANT ACCELERATION



CHANNEL: CSTRC1 FILTER: CH. CLASS 180 PEAK DATA: 35.18 G @ 122.40 MS, 0.01 G @ -3.08 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

DRIVER CHEST DEFLECTION



CHANNEL CSIXD1 FILTER: CH CLASS 600 PEAK DATA: 0.00 IN @ 52.36 MS; -0.60 IN @ 126.80 MS

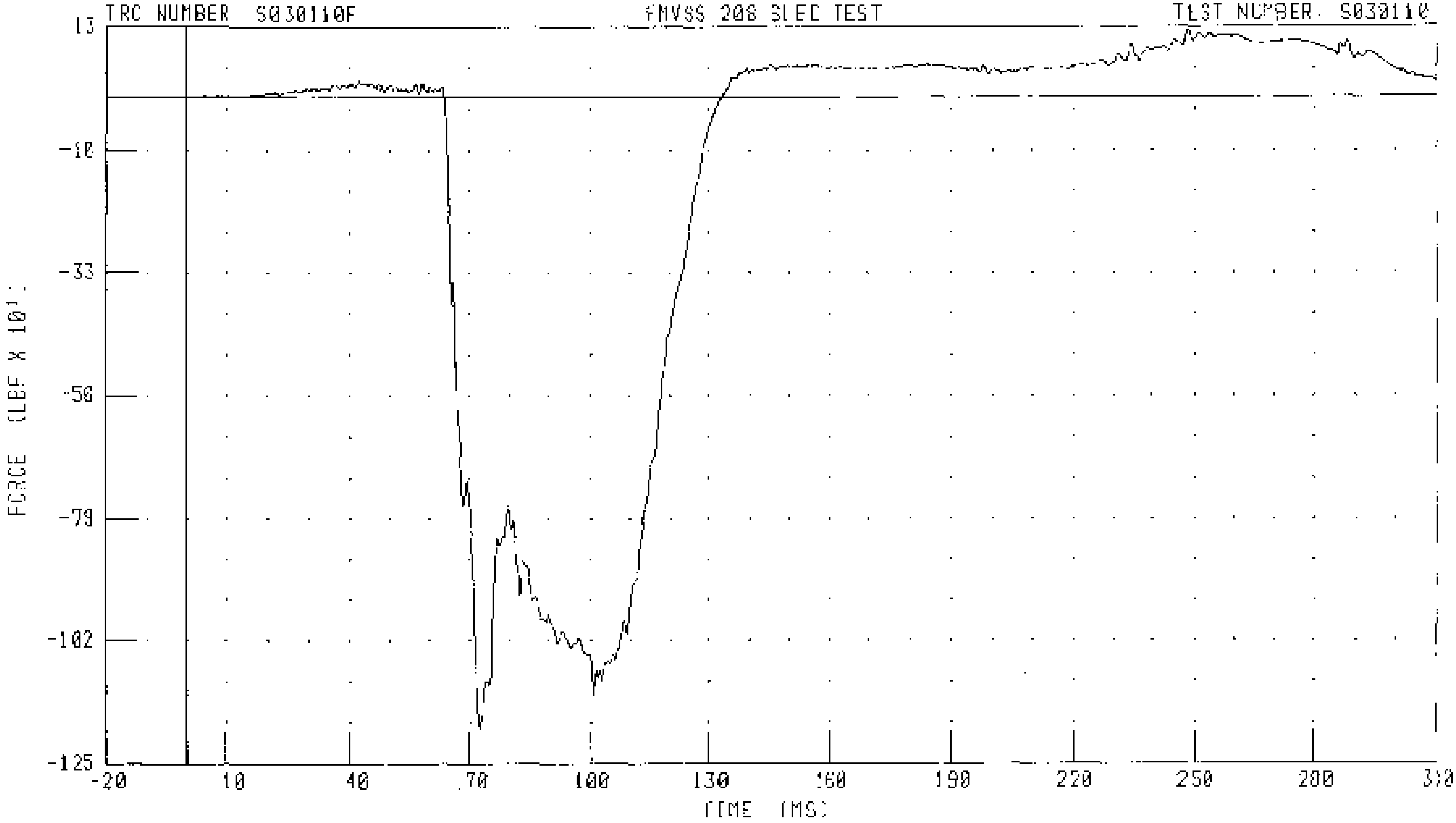
C30201 / 2003 FORD F 150 REGULAR CAB PICKUP TRUCK

DRIVER LEFT FEMUR FORCE

FMVSS 208 SLED TEST

TRC NUMBER S030110F

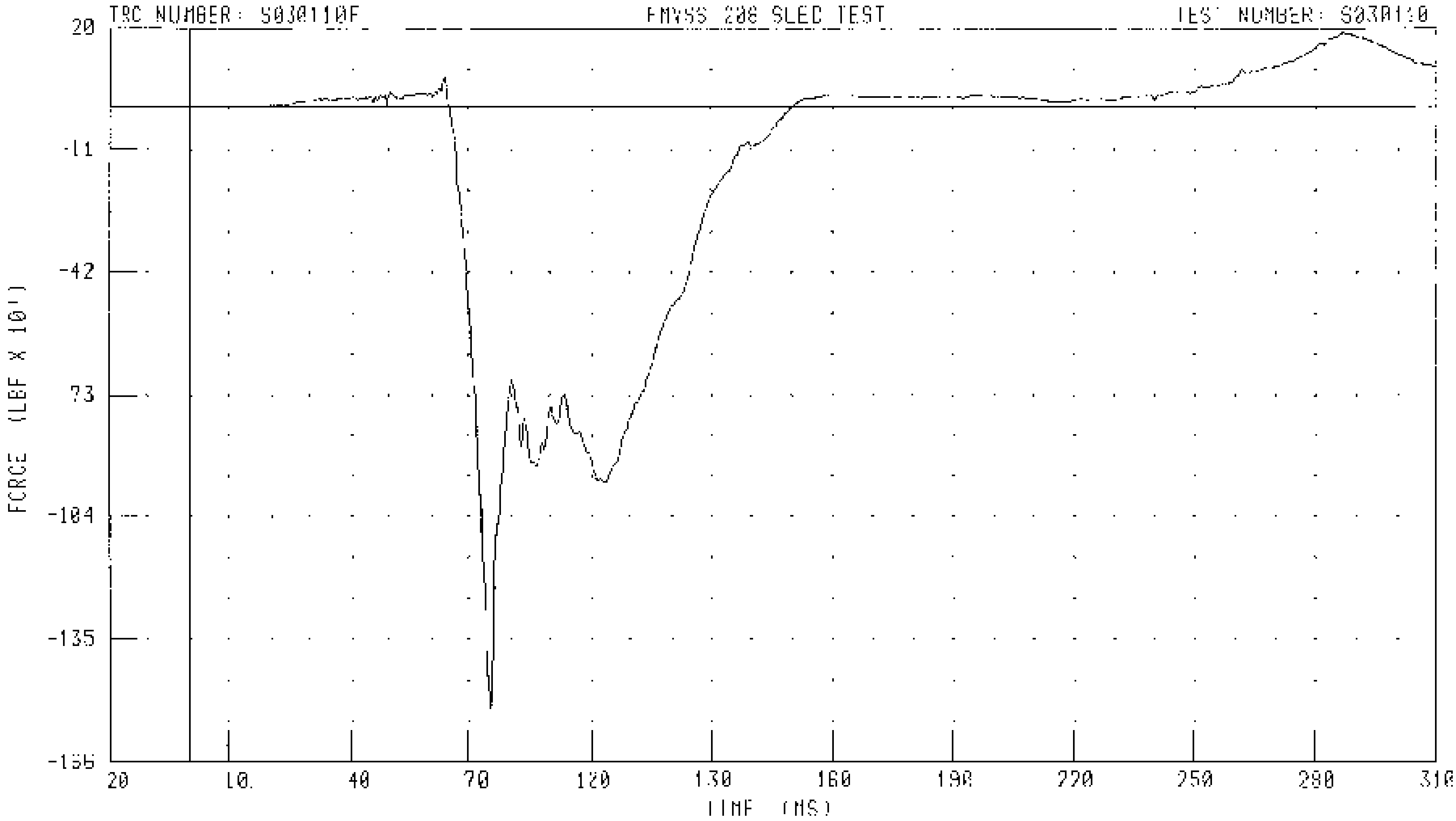
TEST NUMBER S030110



CHANNEL: LFMZF1 FILTER: CH. CLASS 600

PEAK DATA 122.88 LBF @ 240.72 MS, 1185.19 LBF @ 72.86 MS

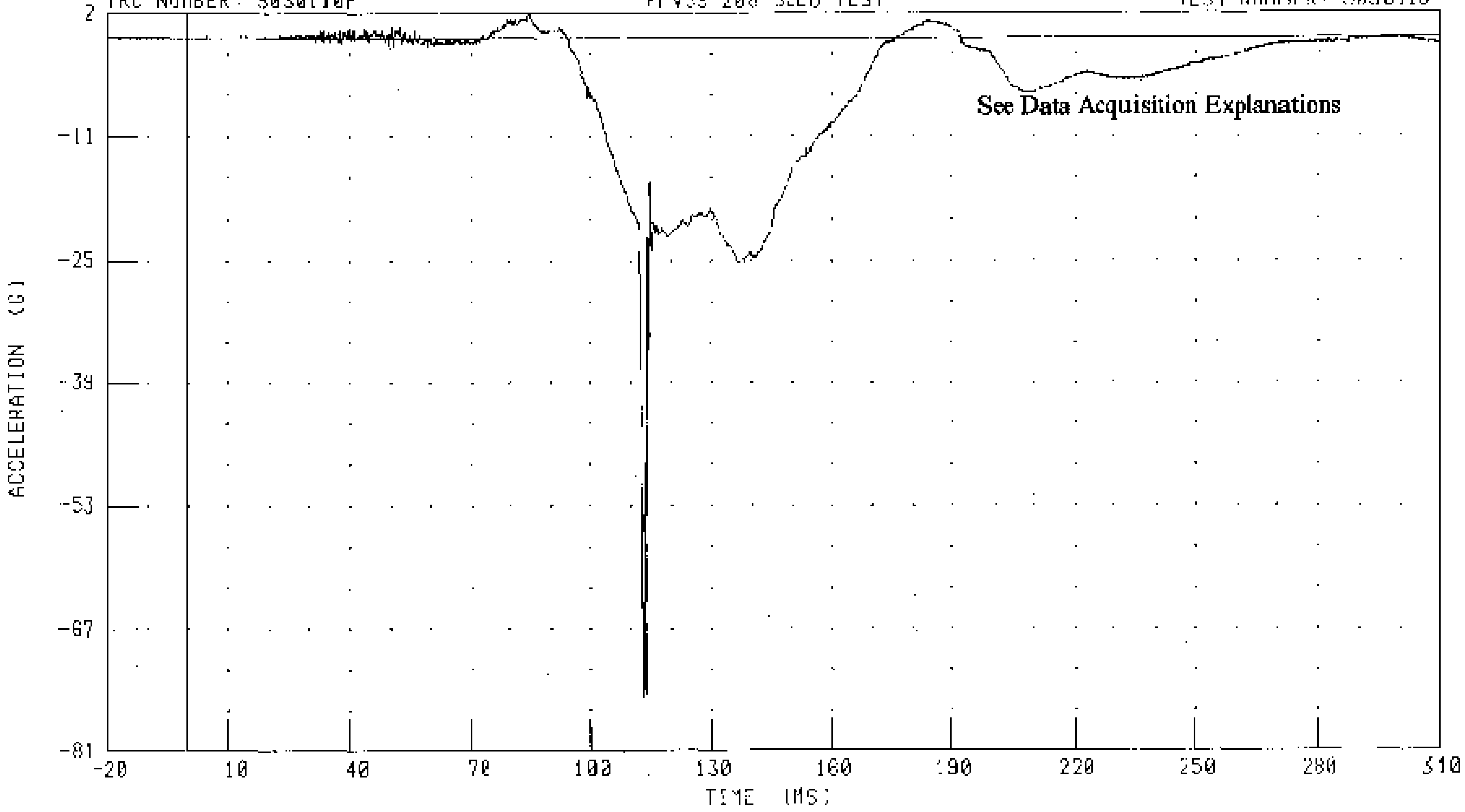
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
DRIVER RIGHT FEMUR FORCE



CHANNEL: RFKZF1   FILTER: CH. CLASS 600   PEAK DATA 189.46 LBF @ 285.80 MS, -1523.40 LBF @ 75.20 MS

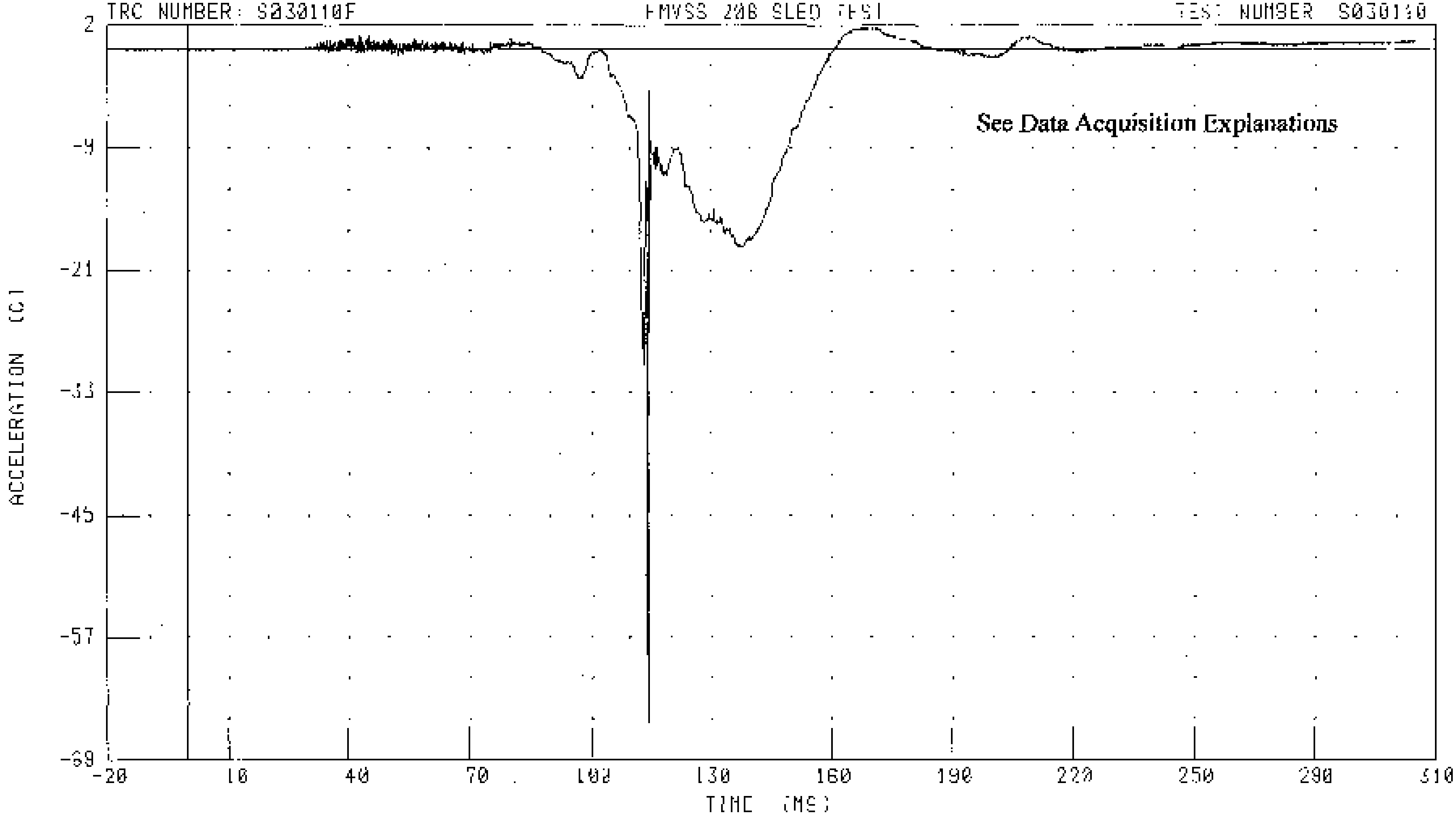
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION

TRC NUMBER: 5030110F   FMVSS 208 SLED TEST   TEST NUMBER: 5030110



CHANNEL: HEDXG2   FILTER: CH CLASS 1000   PEAK DATA 2.55 G @ 84.80 MS, -75.25 G @ 113.41 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION

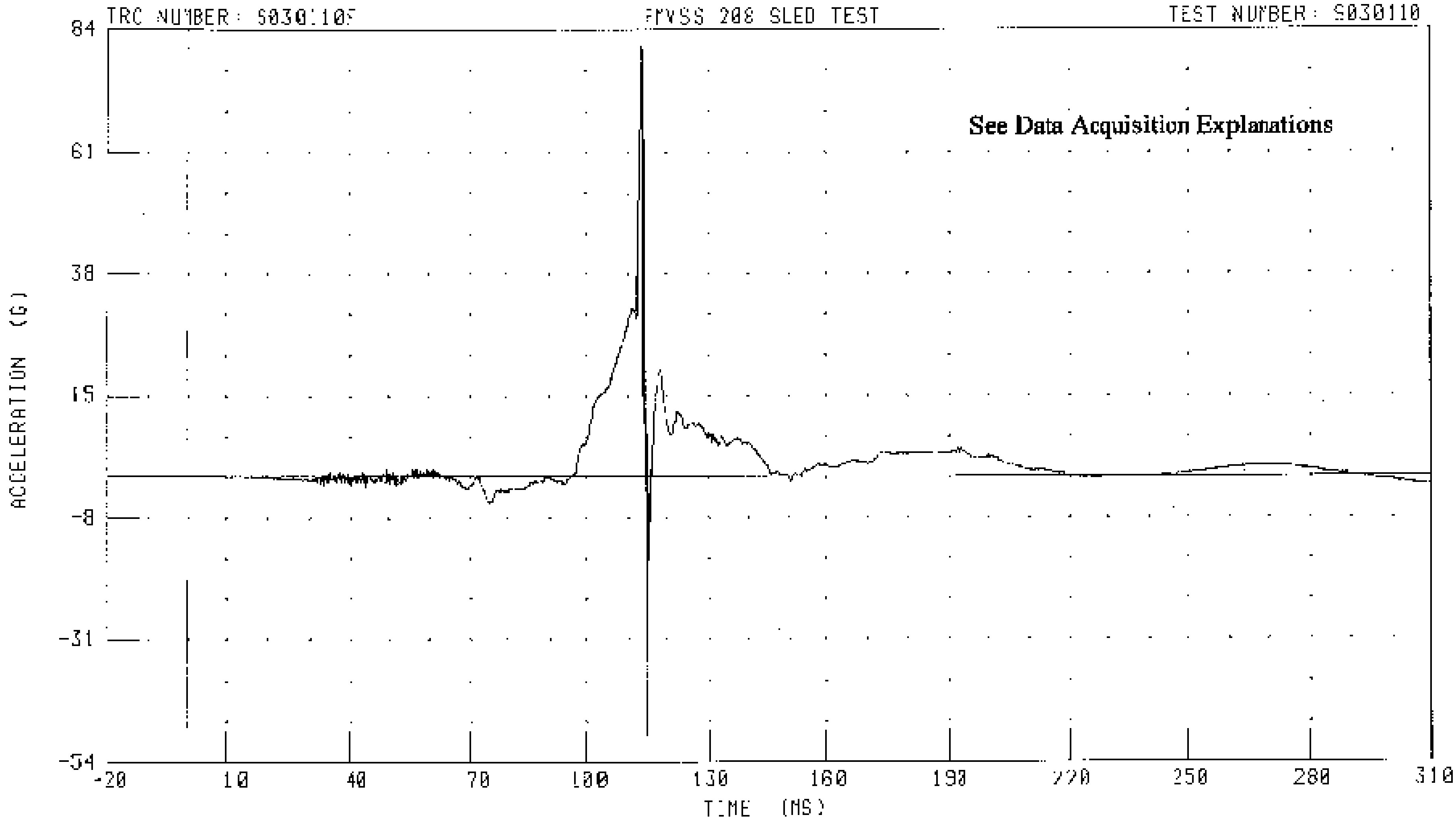


CHANNEL: HEDYG2 FILTER: CH CLASS 1000 PEAK DATA 2.16 G @ 167.76 MS; -66.07 G @ 114.48 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION
FMVSS 208 SLED TEST

TRC NUMBER: S030110F

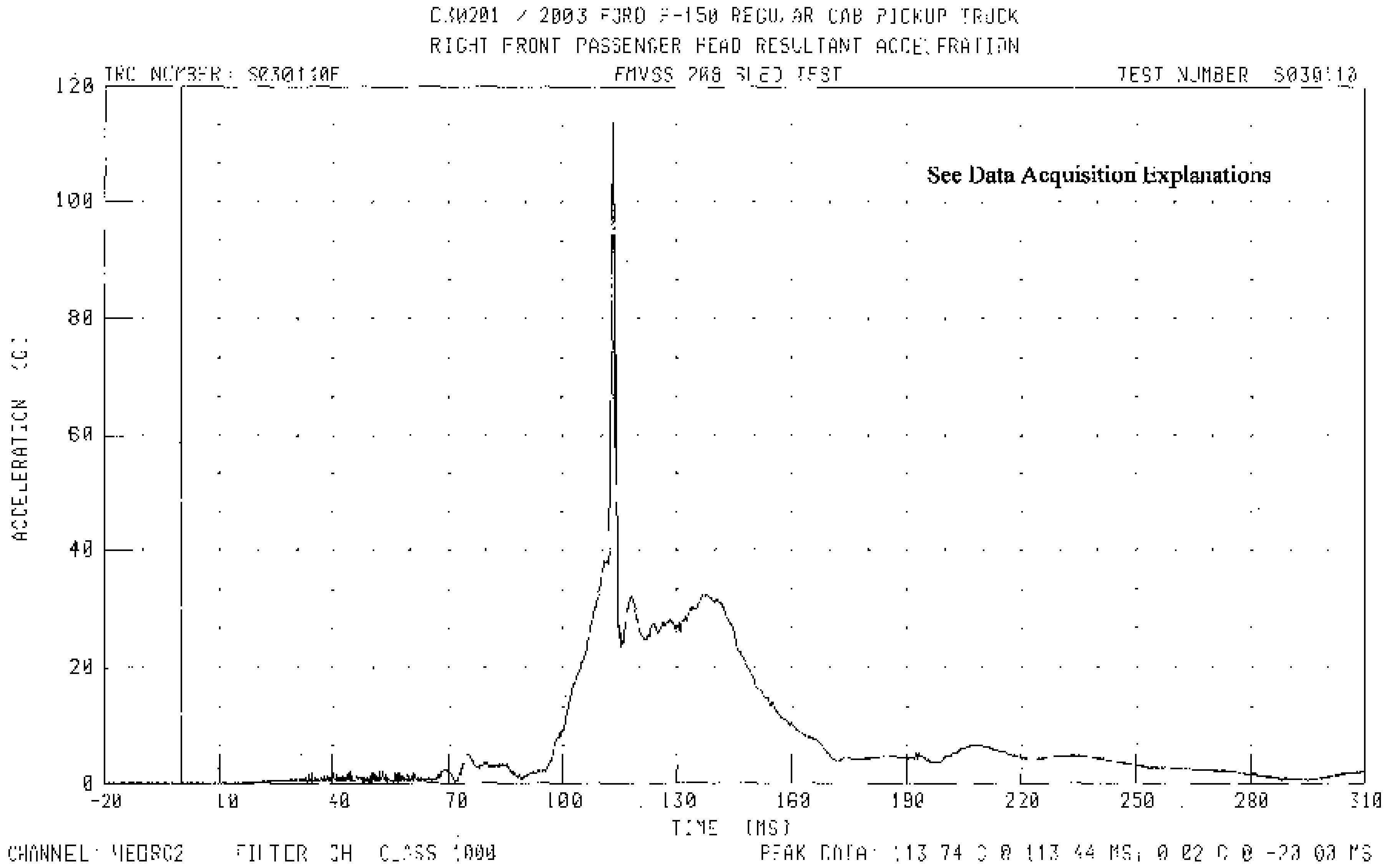
TEST NUMBER: S030110



See Data Acquisition Explanations

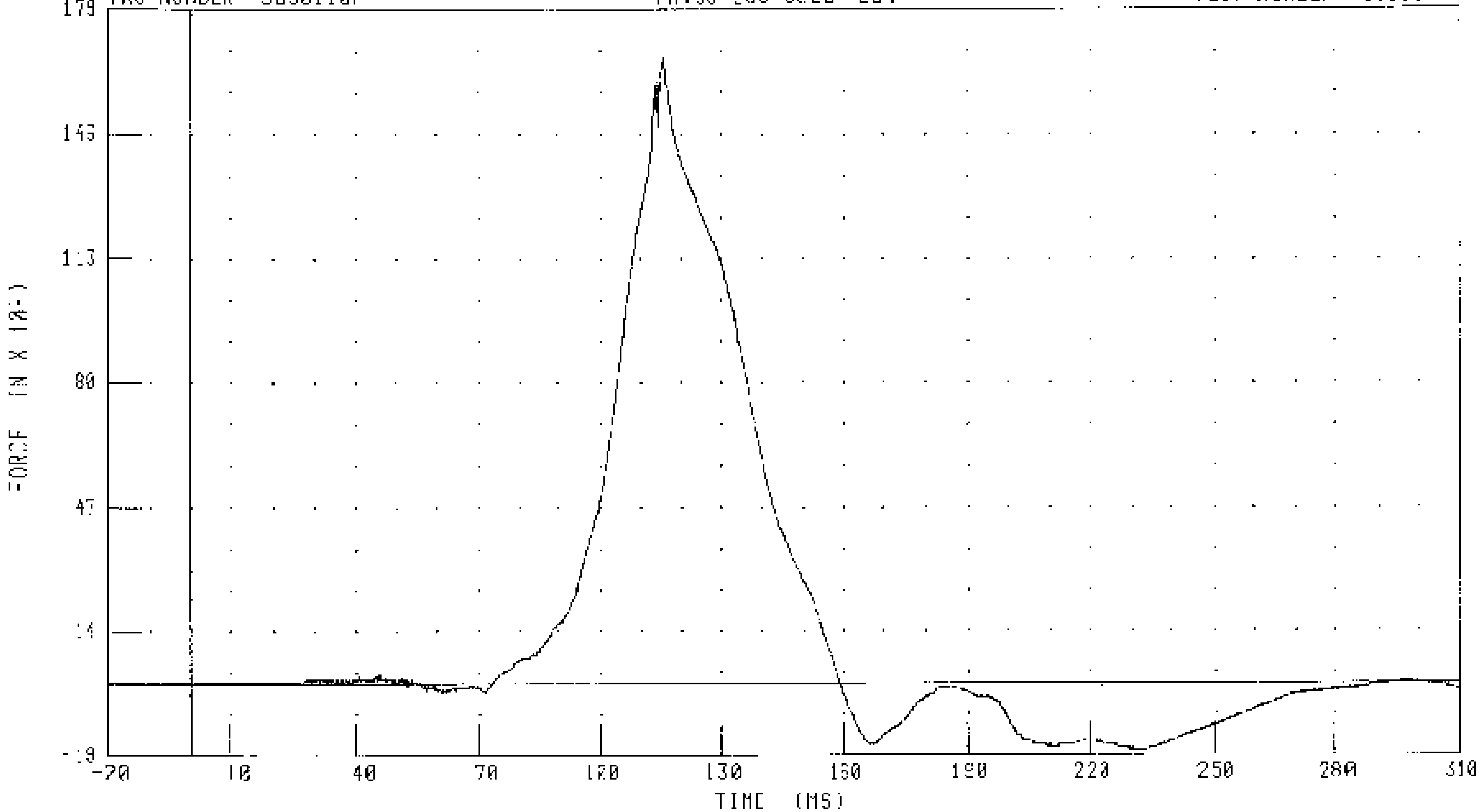
CHANNEL: HEDZG2 FILTER: CH CLASS 1000

PEAK DATA 80.91 G @ 113.36 MS; -49.17 G @ 114.32 MS


CSM201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION
TRC NUMBER: S030110F
FMVSS 208 SLED TEST
TEST NUMBER S030110
See Data Acquisition Explanations
ACCELERATION (G)
120
100
80
60
40
20
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEORC2
FILTER CH CLASS 1000
PEAK DATA: 113 74 G @ 113 44 MS; 0 02 G @ -20 00 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK x-AXIS SHEAR FORCE

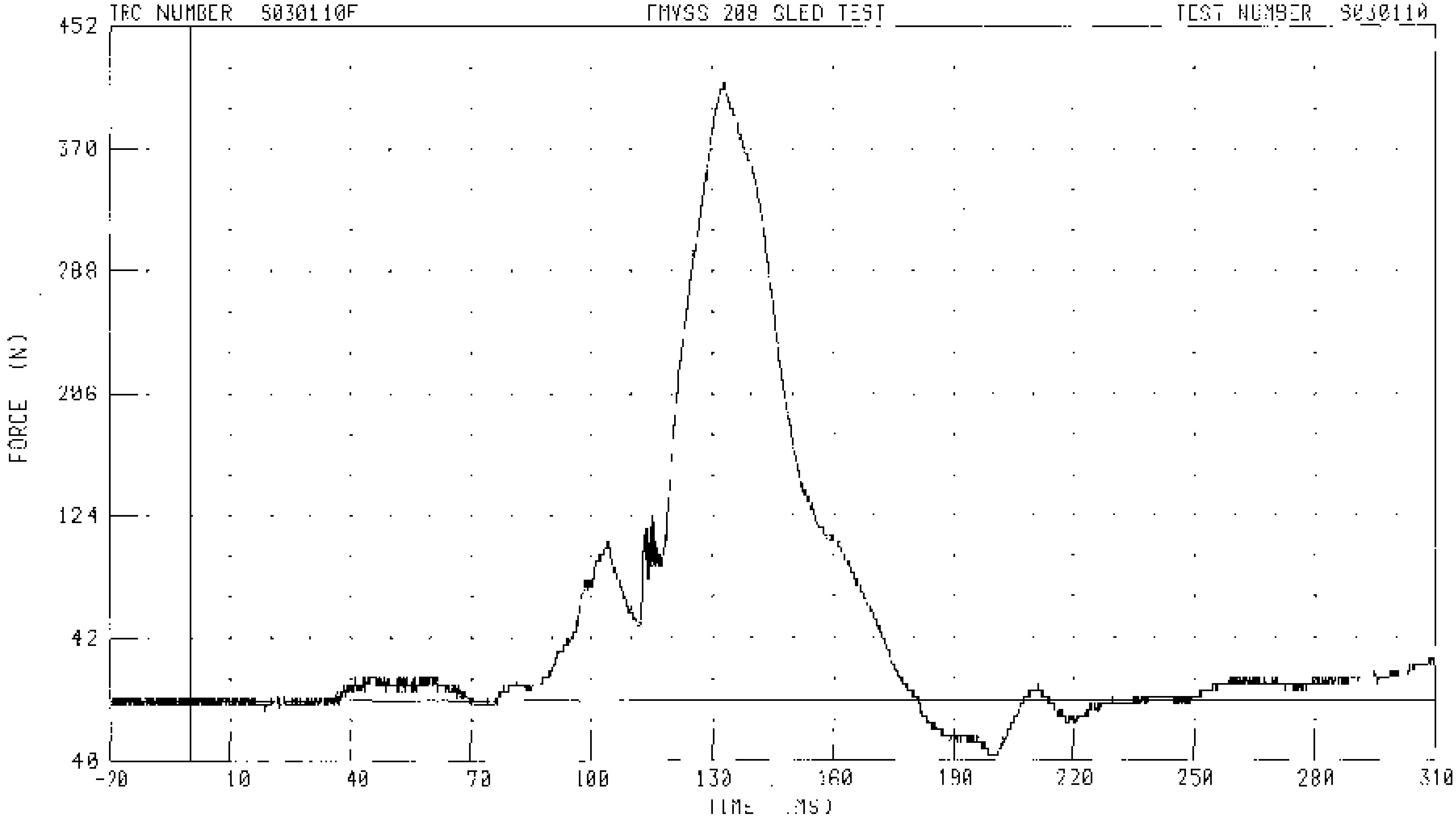
TRC NUMBER: S030110F
FMVSS 208 SLED TEST
TEST NUMBER S030110



CHANNEL NEKXF2 FILTER CH CLASS 1000

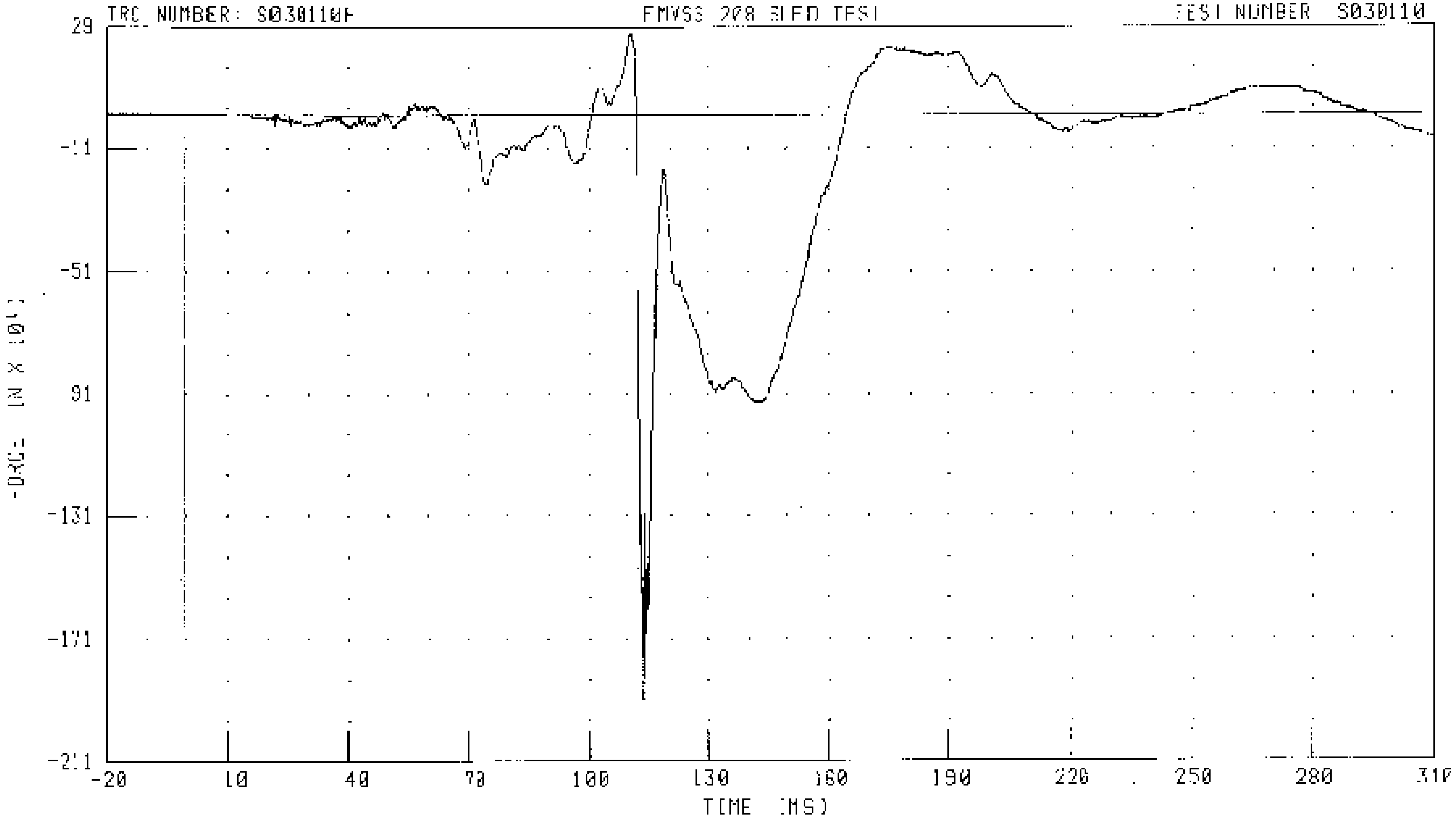
PEAK DATA 1665.45 N @ 115.38 MS, -176.11 N @ 229.20 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE



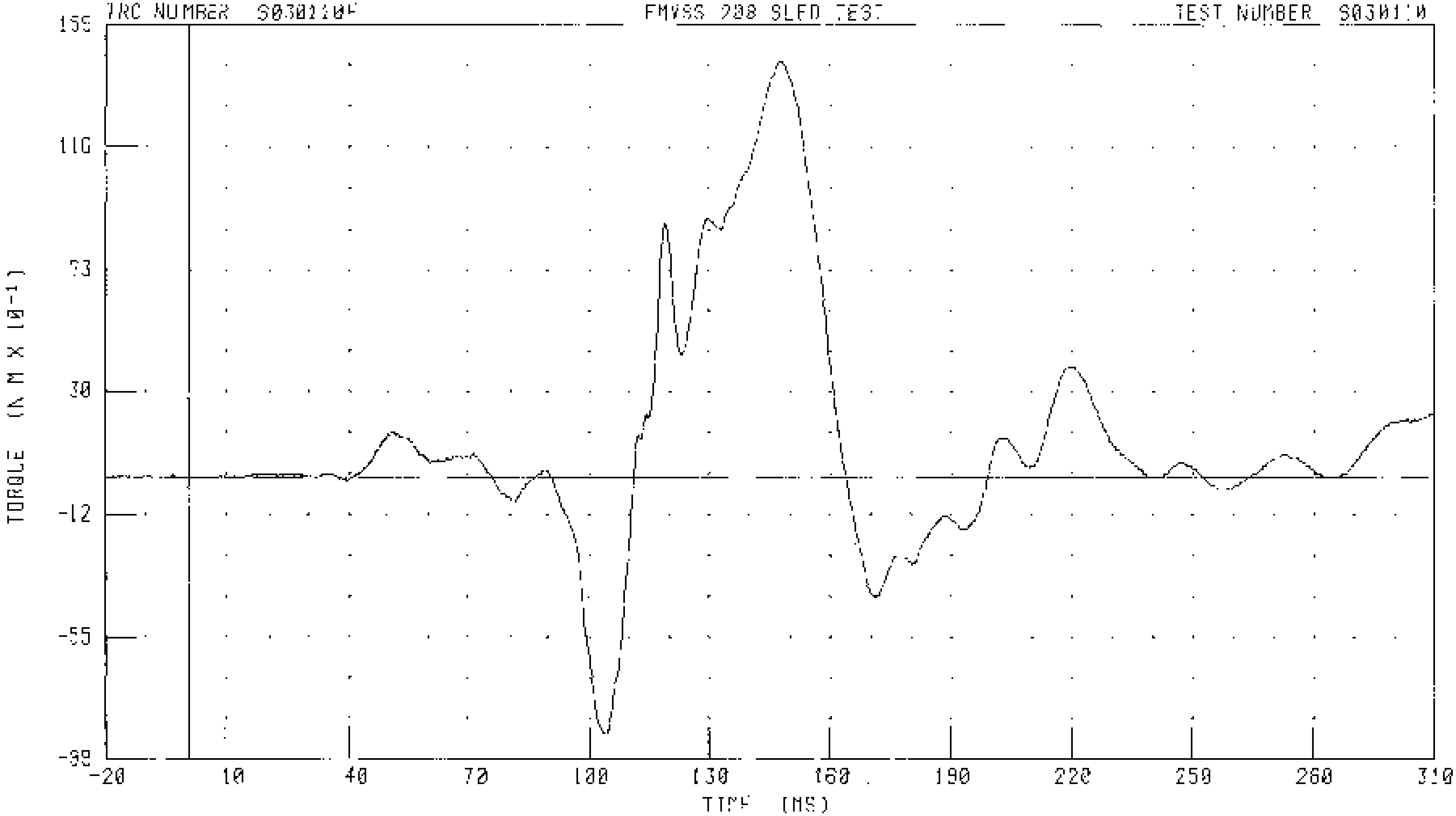
CHANNEL \EKYF2 FILTER: CH CLASS 1000 PEAK DATA 414.59 N @ 132.80 MS; 30.82 N @ 198.72 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE



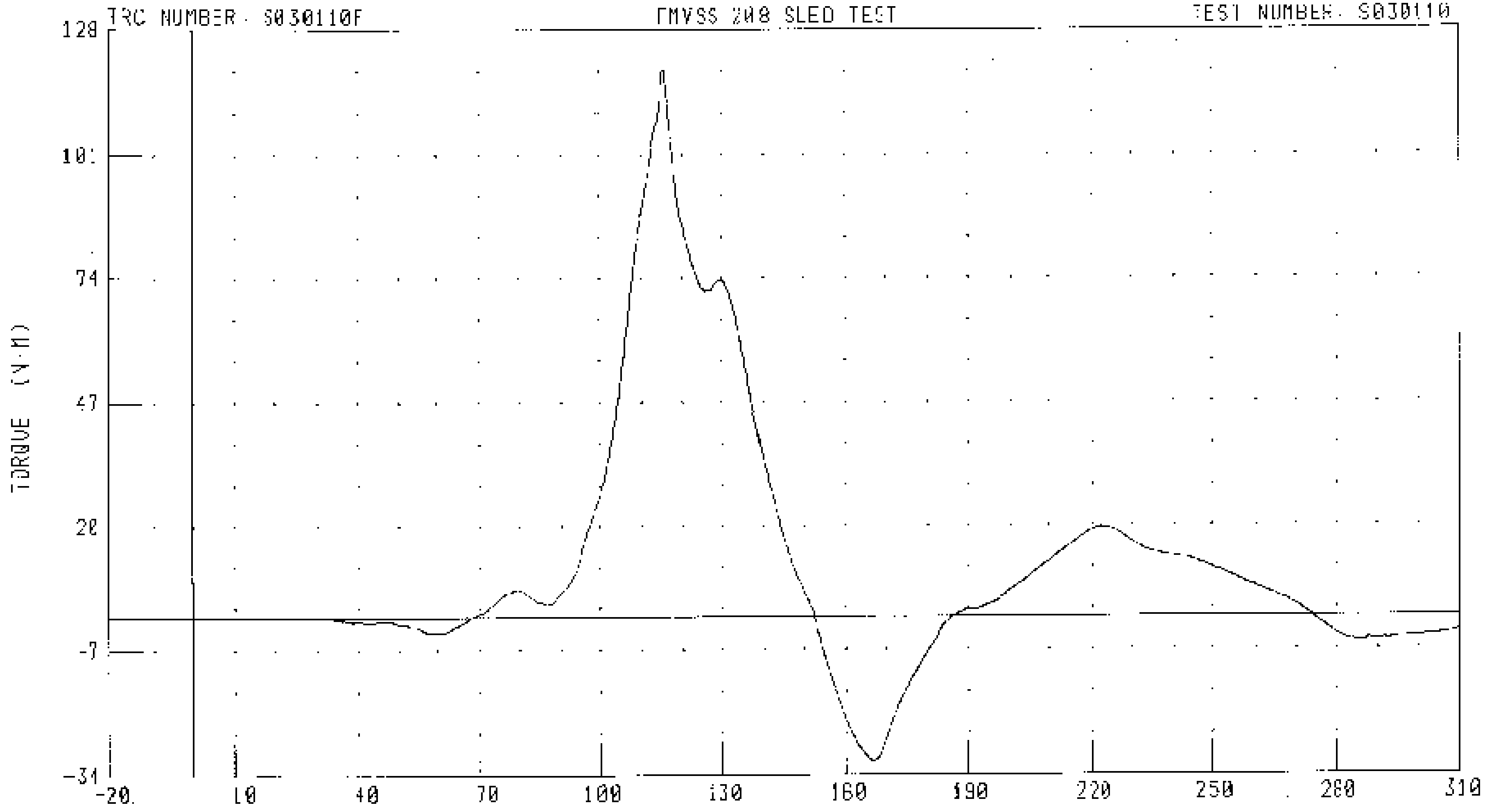
CHANNEL: NEKZF2 FILTER CH. CLASS 1000 PEAK DATA: 271.67 N @ 118.96 MS, -1912.86 N @ 114.16 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS



CHANNEL: NEKXM2 FILTER: CH CLASS 600 PEAK DATA 14.63 N·M @ 148.00 MS; -9.02 N·M @ 104.56 MS

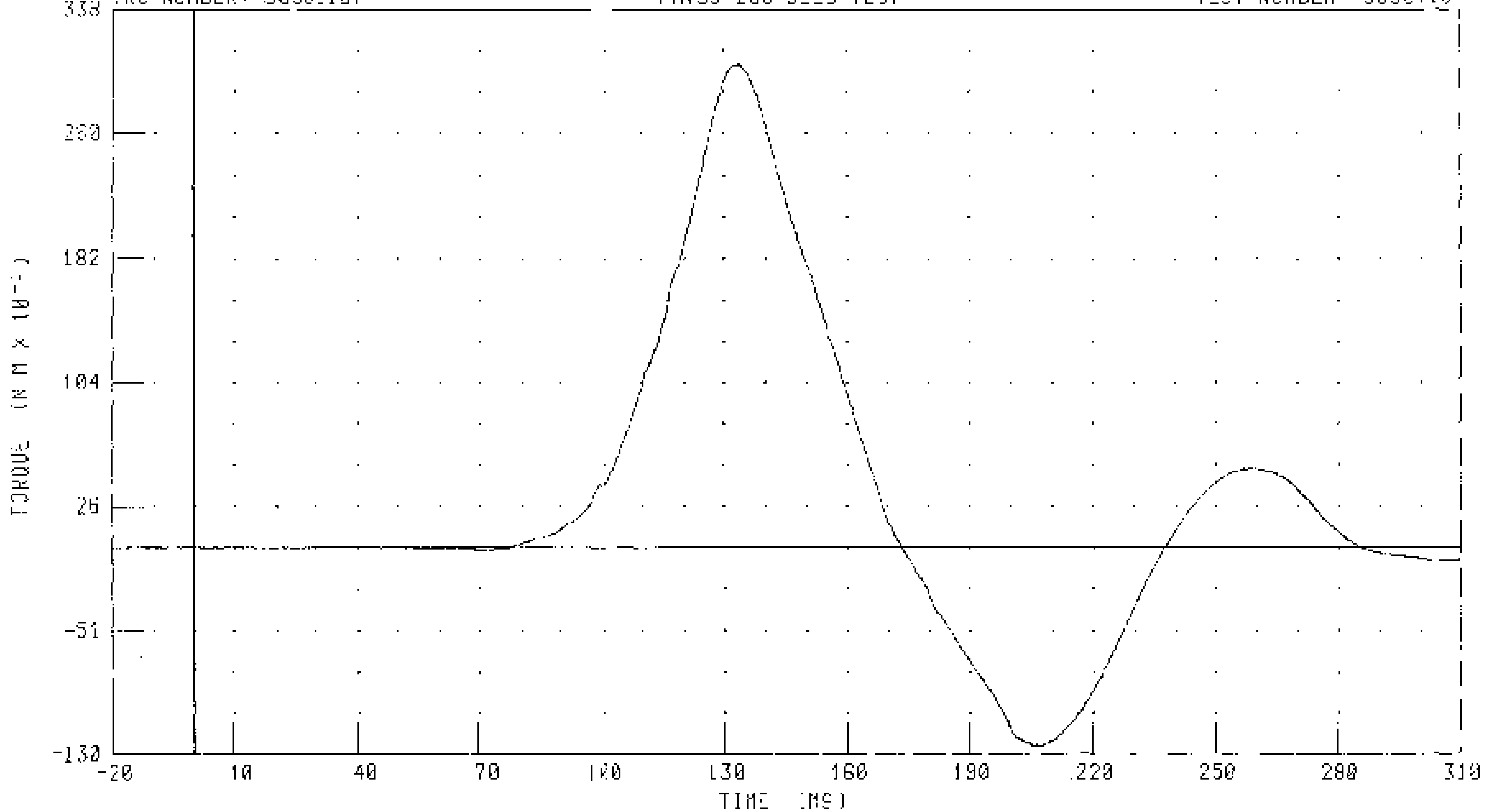
030201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS



CHANNEL: NEKYM2 FILTER: CH. CLASS 600 PEAK DATA: 119.71 N·M @ 115.68 MS; -30.96 N·M @ 166.18 MS

C302P1 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS

TRC NUMBER: S030110F
FMVSS 208 SLED TEST
TEST NUMBER S030110



CHANNEL NECKMZ FILTER: CF. CLASS 600

PEAK DATA: 30.31 N M @ 133.56 MS, -12.50 N M @ 205.52 MS

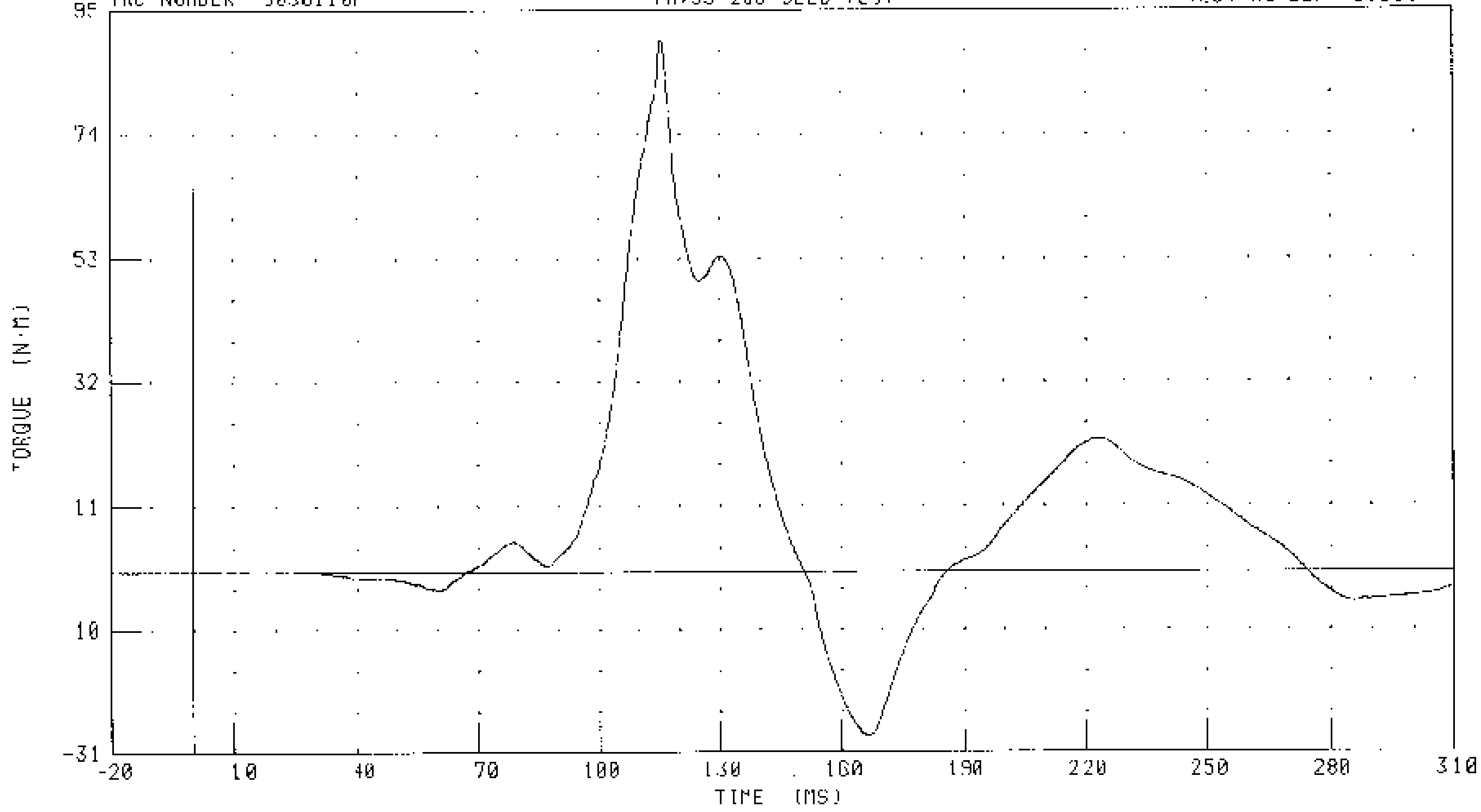
C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS OCCIPITAL CONDYLE

TRC NUMBER: S030110F

FMVSS 208 SLED TEST

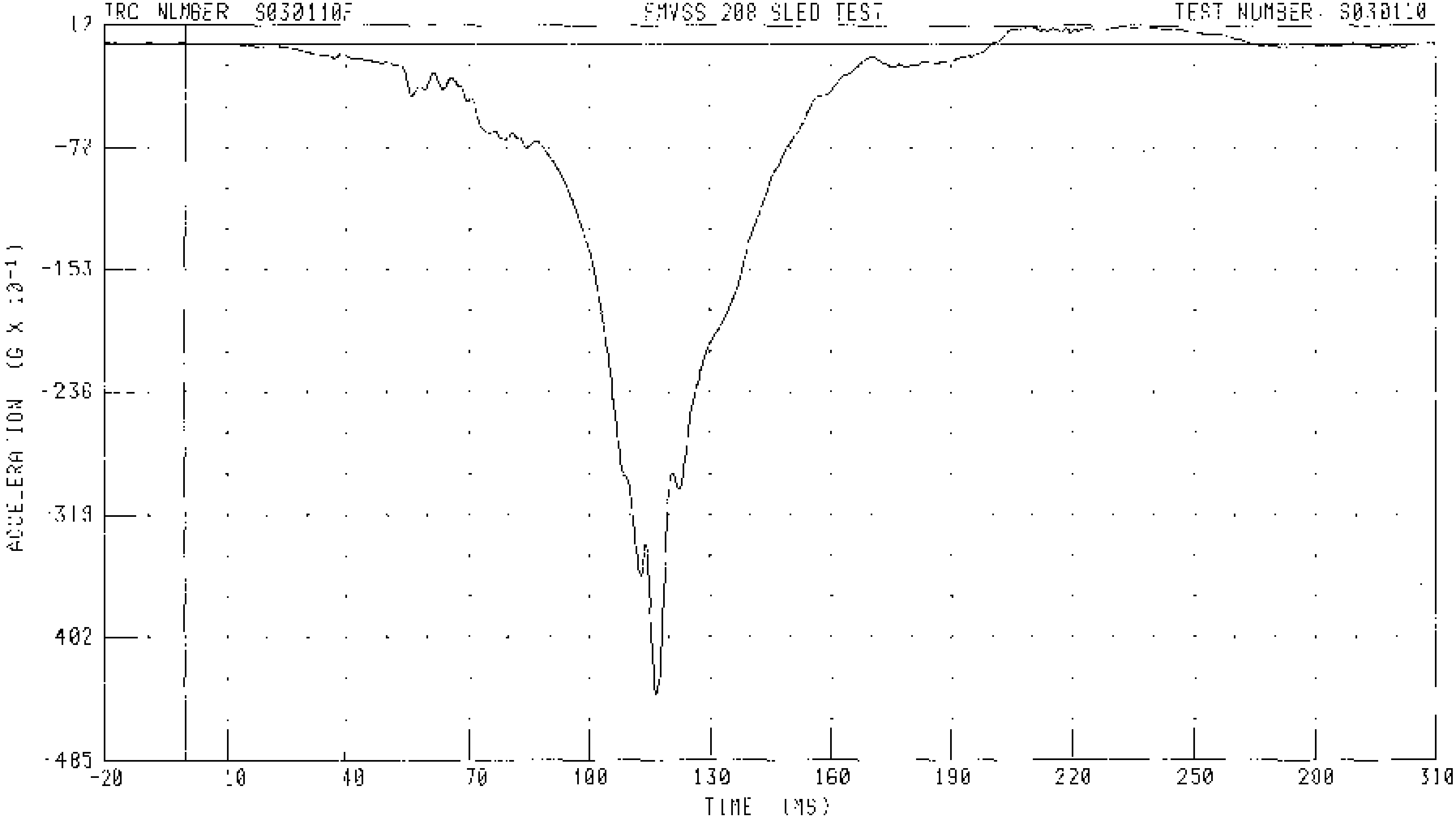
TEST NUMBER S030110



CHANNEL: NEKOM2 FILTER: CH. CLASS 600

PEAK DATA: 39.86 N·M @ 115.60 MS, 28.21 N·M @ 166.24 MS

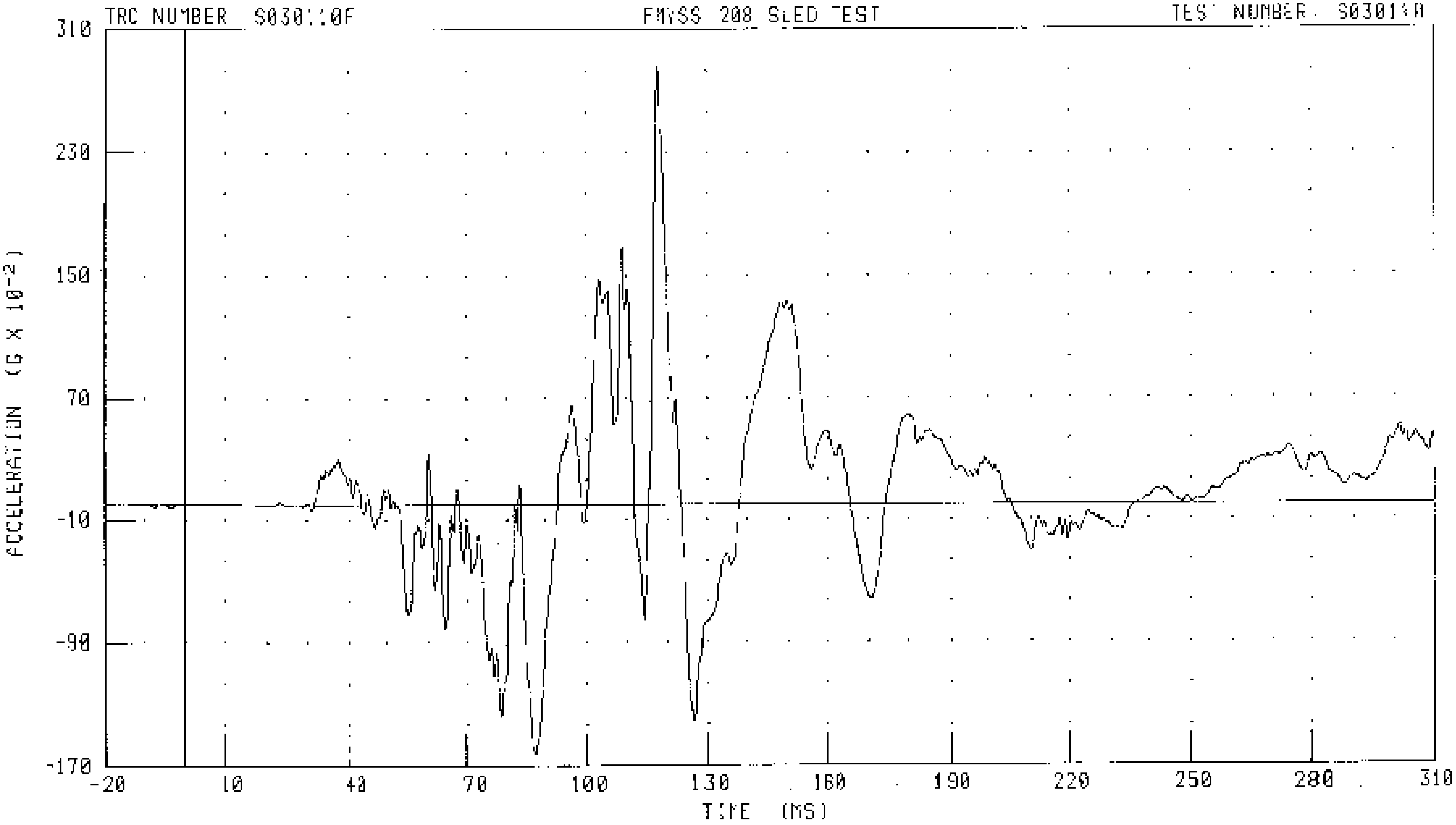
C30201 / 2003 FORD F 150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION



CHANNEL: CSTX02 FILTER CH. CLASS 180

PEAK DATA: 1.25 G @ 232.32 MS, -44.99 G @ 116.88 MS

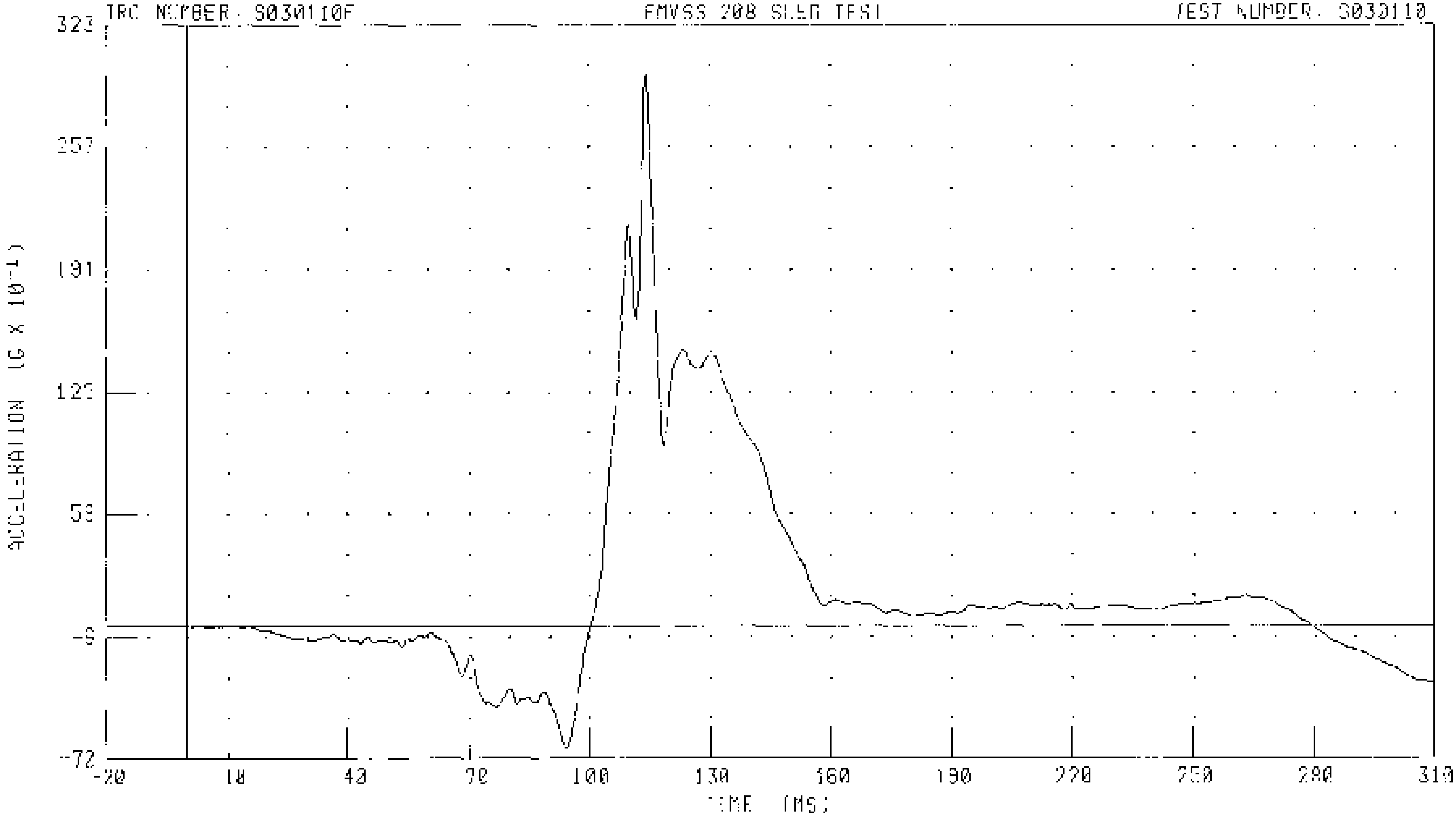
C30201 / 2003 FORD F 150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION



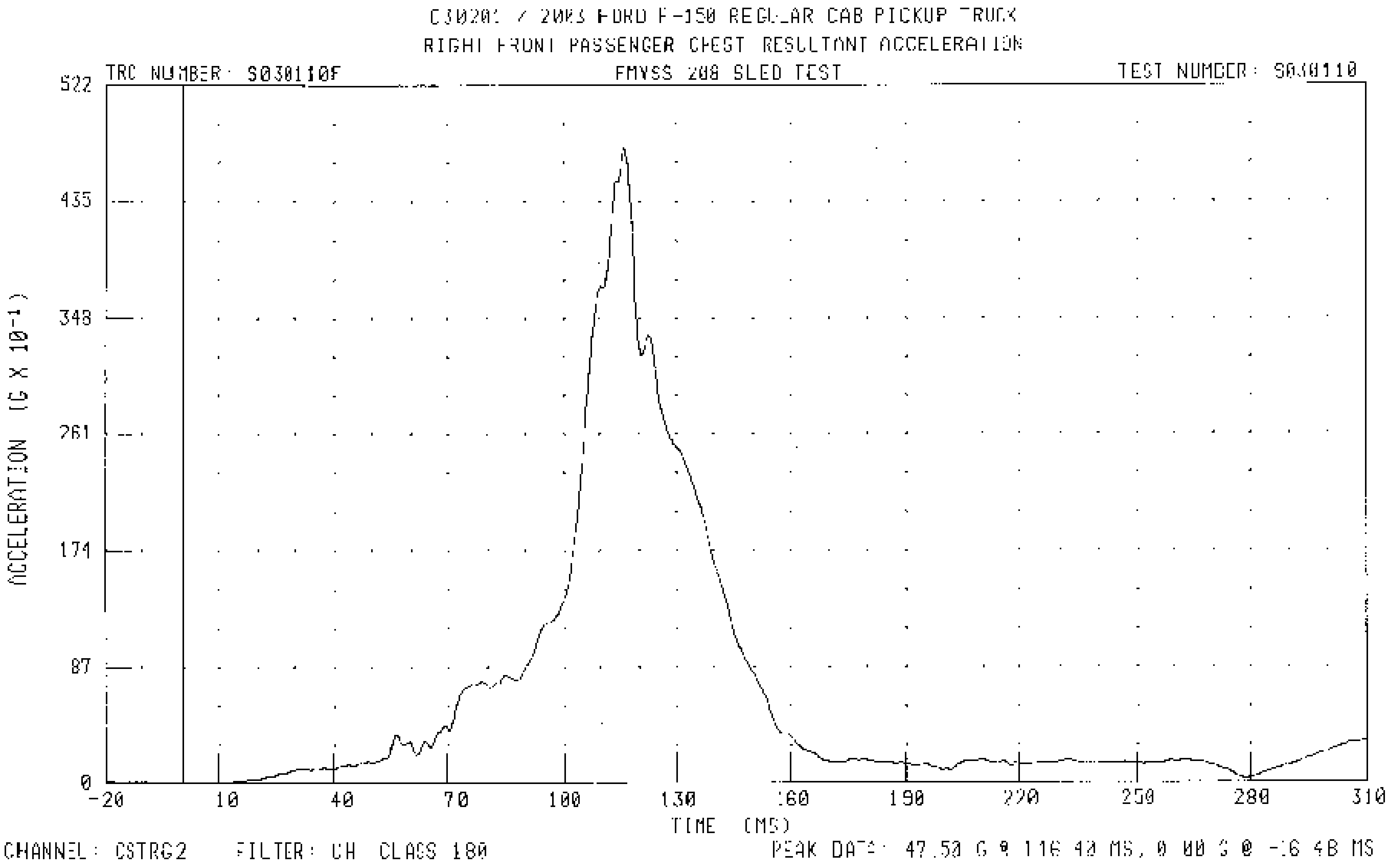
CHANNEL: CSTYG2 FILTER: CH CLASS 180

PEAK DATA: 2.88 G @ 117.52 MS; -1.63 G @ 87.44 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION

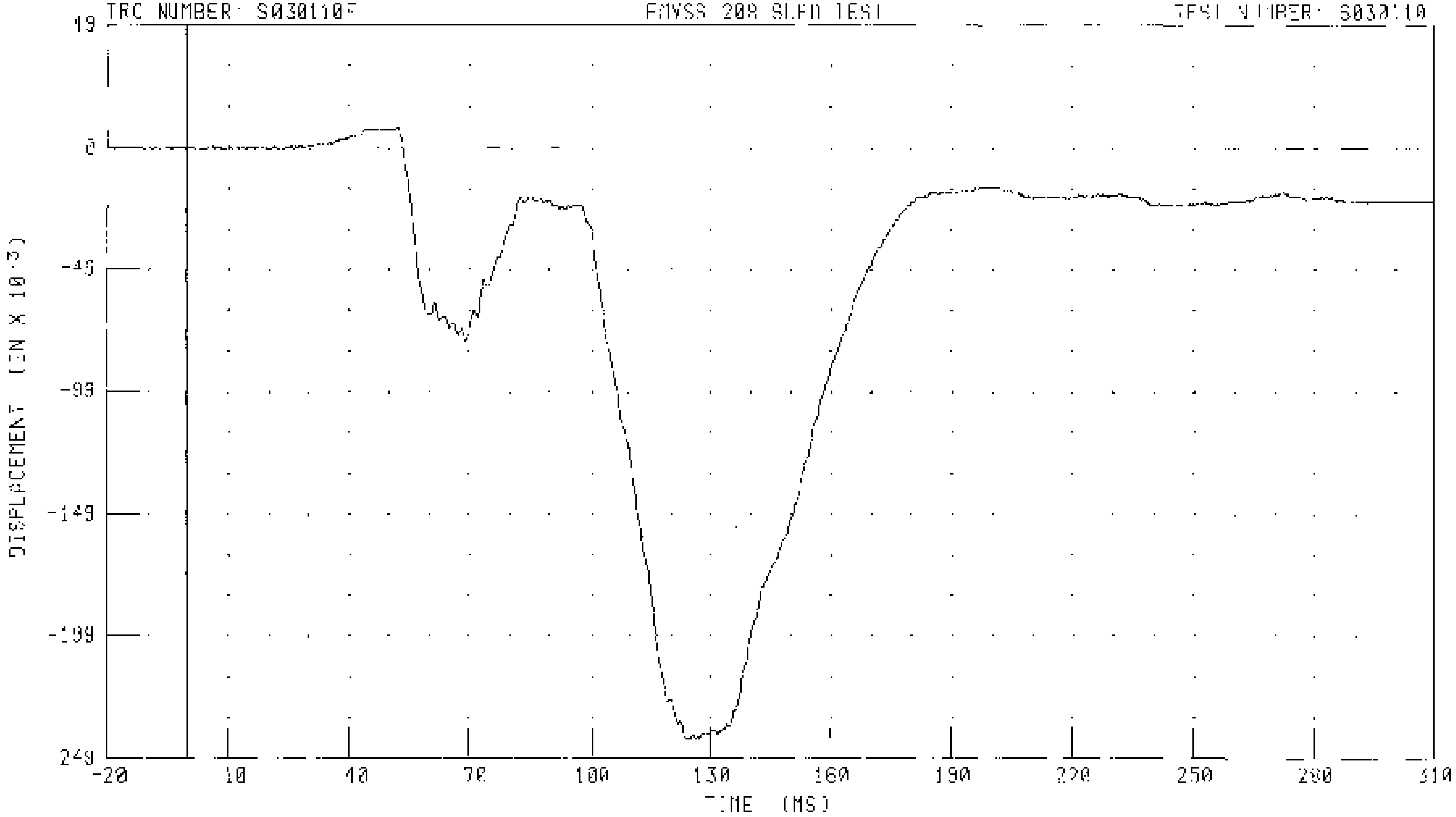


CHANNEL CSTZ02 FILTER CH. CLASS 180 PEAK DATA 29.69 G @ 114.32 MS; -6.03 G @ 94.48 MS


C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION
TRC NUMBER: S030110F
FMVSS 208 SLED TEST
TEST NUMBER: S030110
ACCELERATION (G X 10-1)
522
435
348
261
174
87
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRG2
FILTER: CH CLASS 180
PEAK DATA: 47.50 G @ 116.40 MS, 0.00 G @ -16.48 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

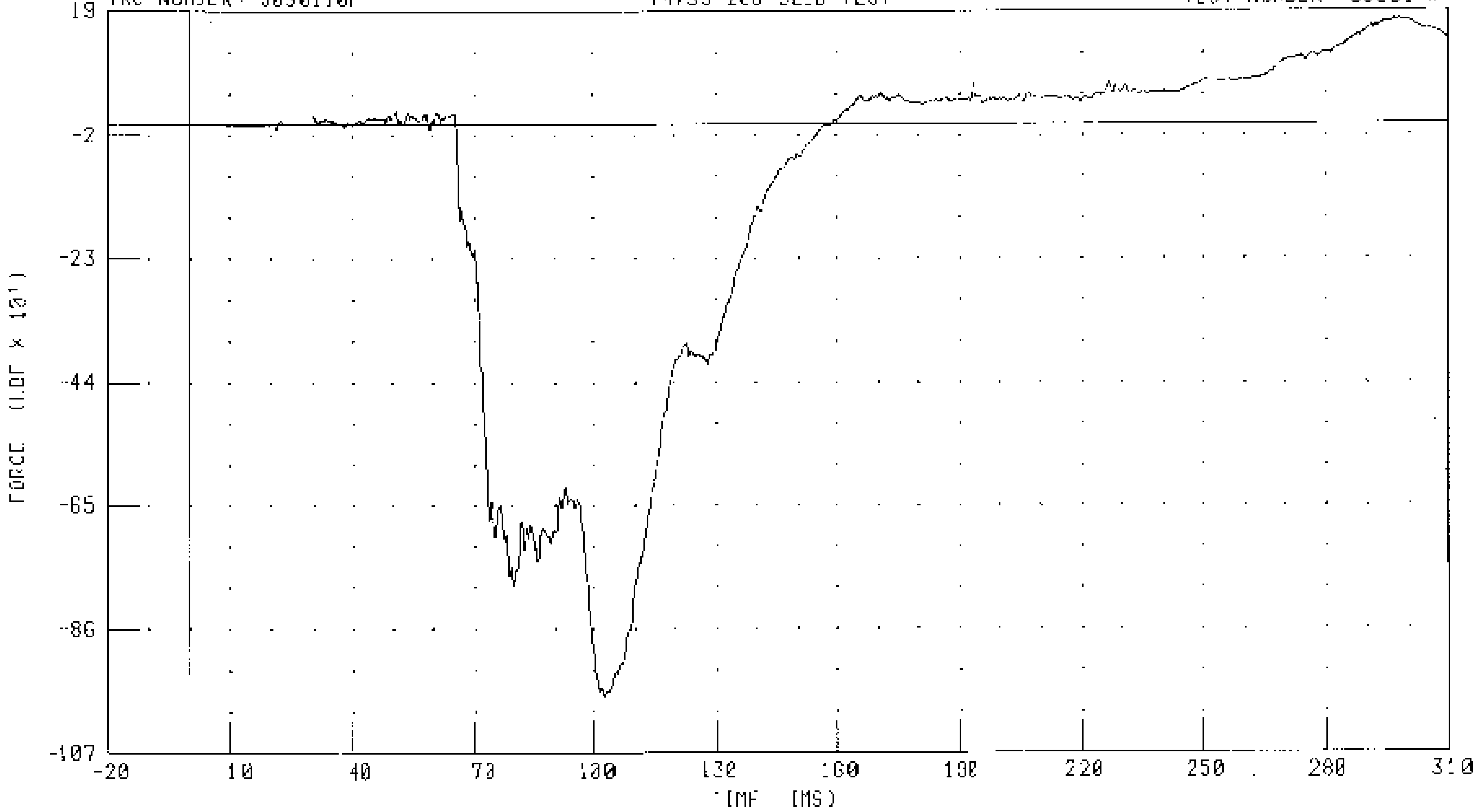
RIGHT FRONT PASSENGER CHEST DEFLECTION



CHANNEL: CSTXU2 FILTER: CH. CLASS 600 PEAK DATA: 0.01 IN @ 52.24 MS; -0.21 IN @ 126.55 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK
RIGHT FRONT PASSENGER LEFT FEMUR FORCE

TRC NUMBER: S030110F
FMVSS 208 SLED TEST
TEST NUMBER: S030110



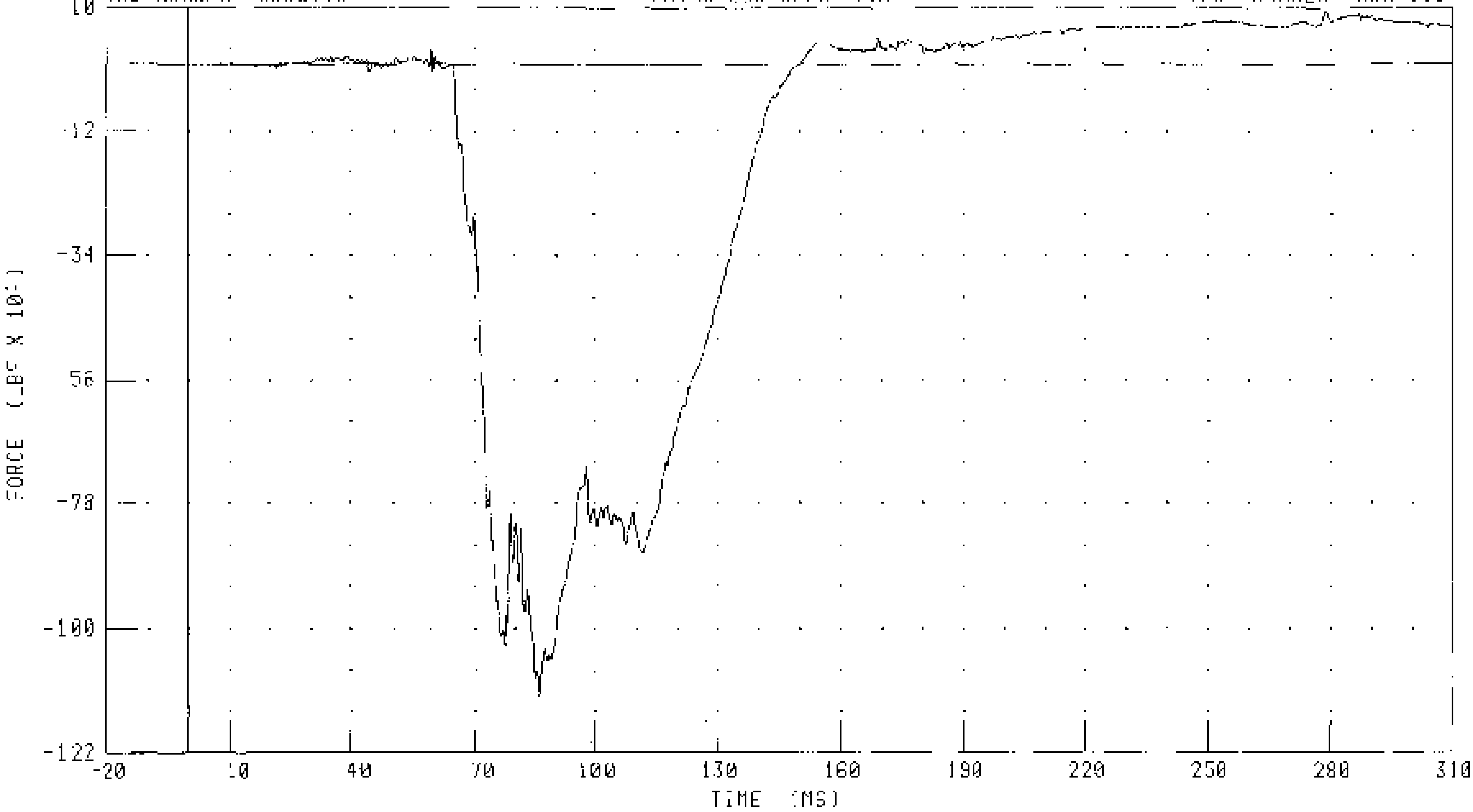
CHANNEL: LFMZF2 FILTER: CH. CLASS 600

PEAK DATA: 176.79 LBF @ 299.88 MS, -974.53 LBF @ 102.40 MS

C30201 / 2003 FORD F-150 REGULAR CAB PICKUP TRUCK

RIGHT FRONT PASSENGER RIGHT FEMUR FORCE

TRC NUMBER S0301105 FMVSS 208 SLED TEST TEST NUMBER S030110



CHANNEL RFMZF2 FILTER CH CLASS 600 PEAK DATA 95.08 LBF @ 278.80 MS; -1120.97 LBF @ 85.92 MS

Appendix C

Manufacturer's Vehicle Information

SEATING

Notes:

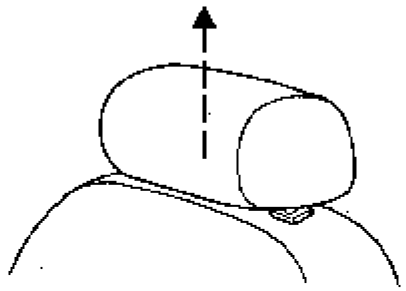
[redacted]

[redacted]

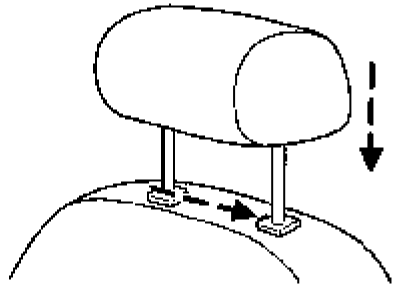
Adjustable head restraints (if equipped)

Head restraints help to limit head motion in the event of a rear collision. Adjust your head restraint so that it is located directly or as close as possible behind your head.

The head restraints can be moved up and down.

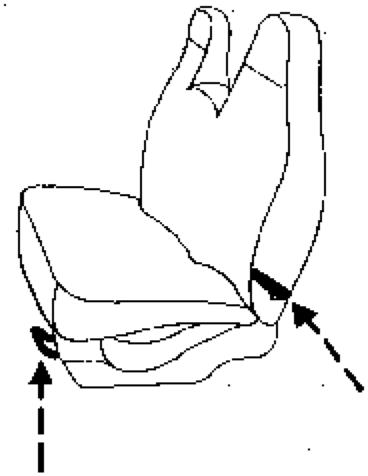


Push control to lower head restraint.



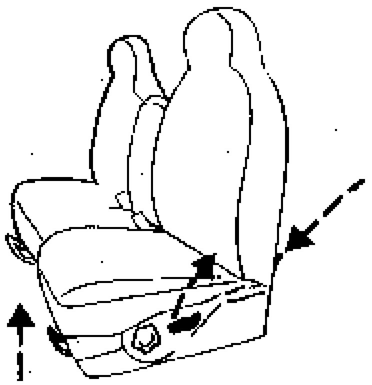
Full bench seat (if equipped)

- Lift the release bar to move the seat forward or backward. Ensure that the seat is relatched into place.
- Pull up on the lever located at the bottom of the seatback to quickly fold the seatback forward.



60/40 split bench seat (if equipped)

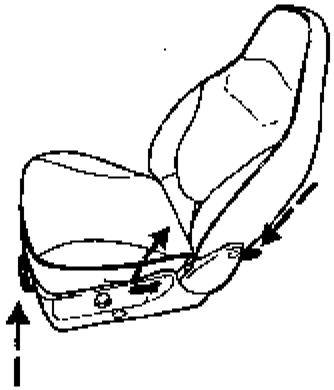
- Lift the release bar to move the seat forward or backward. Ensure the seat is relatched into place.
- Pull the seatback handle up to move the seat back forward or backward.
- Push down the release lever (if equipped) located on the back of the seat to quickly fold the seatback forward.



[redacted]

Captain's chair (if equipped)

- Lift the track release bar to move the seat forward or rearward. Make sure that the seat is relatched into place.
- Pull the release lever handle located on the side of the seat up to move the seat back forward or backward.
- Push down the release lever (if equipped) located at the bottom of the seatback to quickly fold the seatback forward.

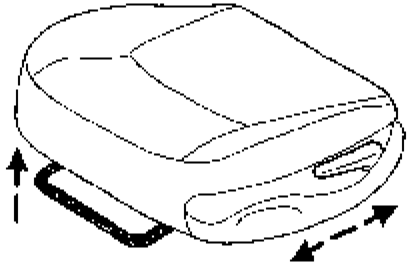


Adjusting the front manual seat

[redacted]

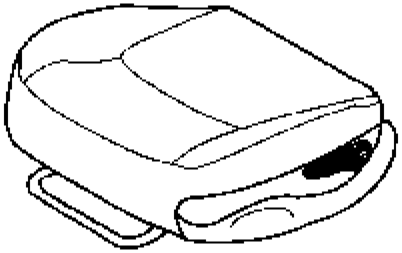
[redacted]

Lift handle to move seat forward or backward.



[redacted]

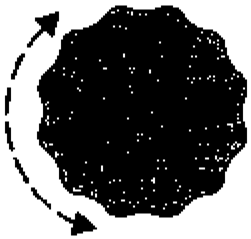
Pull lever up to adjust seatback.



Using the manual lumbar support

For more lumbar support, turn the lumbar support control toward the front of vehicle.

For less lumbar support, turn the lumbar support control toward the rear of vehicle.



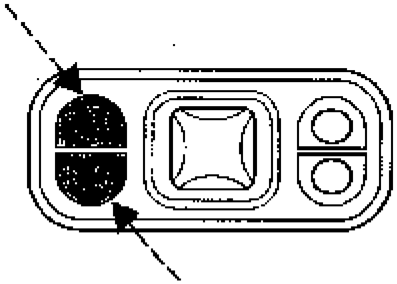
Adjusting the front power seat (if equipped)

The control is located on the outboard side of the seat cushion.

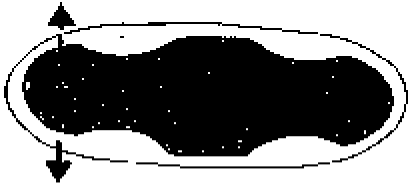
Your vehicle will only be equipped with one of the two controls shown.

Press to raise or lower the front portion of the seat cushion.

- Type A

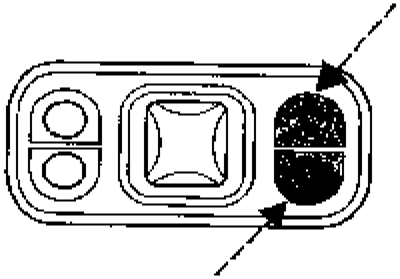


- Type B

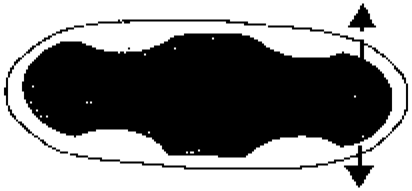


Press to raise or lower the rear portion of the seat cushion.

- Type A

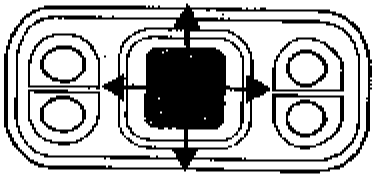


- Type B

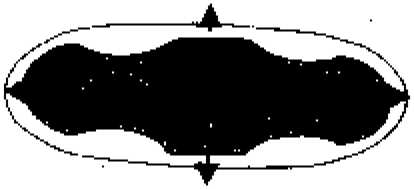


Press the control to move the seat forward, backward, up or down.

- Type A



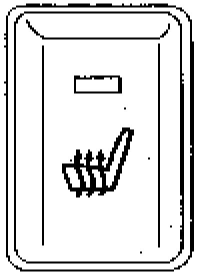
- Type B



Heated seats (If equipped)

To operate the heated seats:

- Push control located on the side of the seat to activate.
- Push again to deactivate.



The indicator light on the control will illuminate when activated.

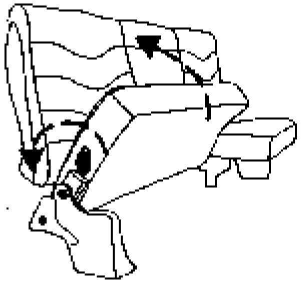
REAR SEATS

Folding up the rear seats (If equipped — SuperCab only)

The rear seatback has a split 60/40 seat. Each seat cushion can be flipped up into the seatback position.

1. Pull control to release seat cushion.

2. Rotate seat cushion up until it locks into vertical storage position.



Returning the seat to seating position

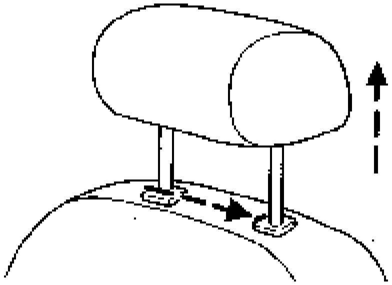
1. Pull control on the side of the seat to release seat cushion from storage position

2. Push seat cushion down until it locks into horizontal position.

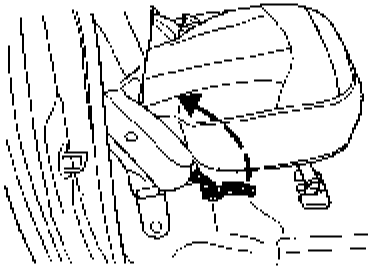
Folding down the rear seats (SuperCrew only)

The rear seatback has a split 60/40 seat. Each seat can be folded down into the load floor position.

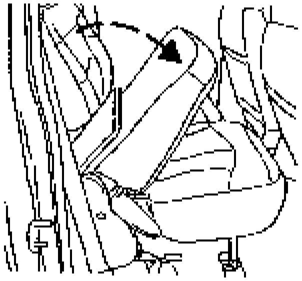
1. Remove the head restraint. Push the release button at the base of the head restraint post and pull the head restraint up and out.



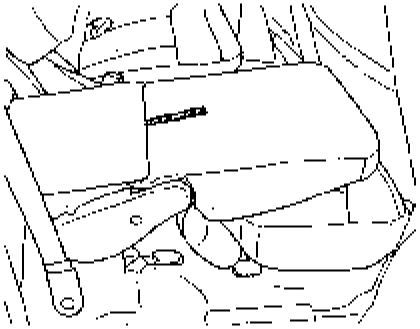
2. Pull control to release seat.



3. Pull seatback toward front seat and down into load floor position.

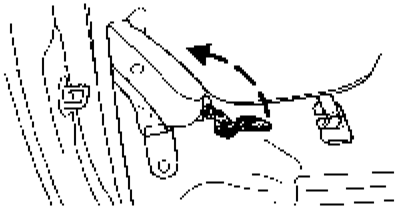


4. Make sure seat is pushed all the way down and locks into position.

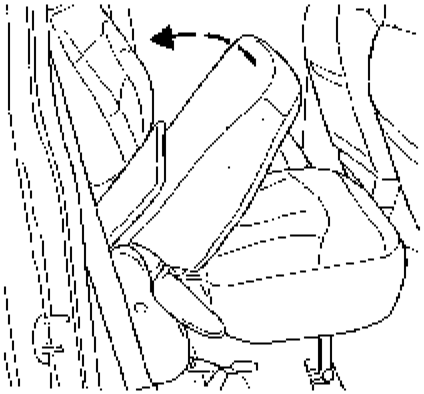


Returning the seat to seating position

1. Pull control on the side of the seat to release seat cushion from the load floor position.

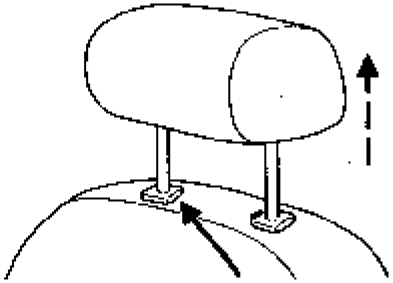


2. Lift seatback up until it locks into vertical position.



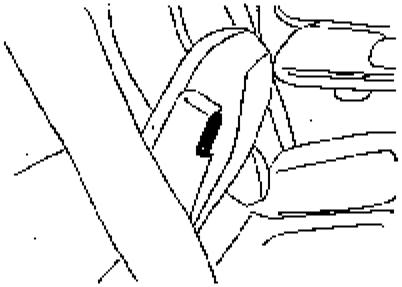
3. Return the head restraint to its original position.

If the head restraint is inserted backwards, it may lock and not be removable by using the release button. If this happens use a stiff piece of wire such as a paper clip, and insert the wire into the hole on the opposite side of the release button. Depress the release button and remove the head restraint.



Using the amrest (if equipped)

Push the release control to move the armrest up or down.



SAFETY RESTRAINTS

Safety restraints precautions

[redacted]

[redacted]

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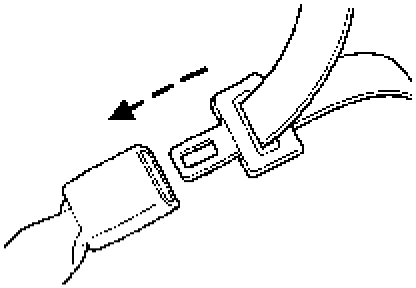
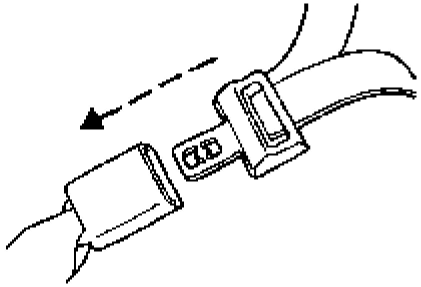
Combination lap and shoulder belts

1. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.

- Front seats

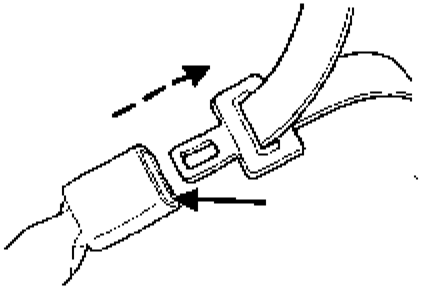


- Rear seats (if equipped)

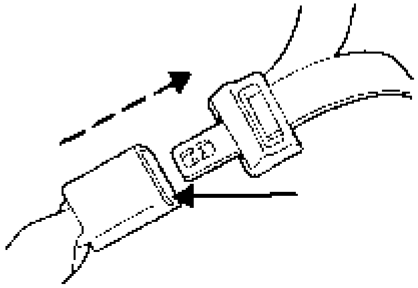


2. To unfasten, push the release button and remove the tongue from the buckle.

- Front seats



- Rear seats (if equipped)



The front and rear outboard safety restraints in the vehicle are combination lap and shoulder belts. The front passenger and rear seat outboard safety belts have two types of locking modes described below:

Vehicle sensitive mode

The vehicle sensitive mode is the normal retractor mode, allowing free shoulder belt length adjustment to your movements and locking in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply, or the vehicle receives an impact of approximately 8 km/h (5 mph) or more, the combination safety belts will lock to help reduce forward movement of the driver and passengers.

The front seat belt system can also be made to lock manually by quickly pulling on the shoulder belt. Rear seat belts (if equipped) cannot be made to lock up by pulling quickly on the belt.

Automatic locking mode

In this mode, the shoulder belt is automatically pre-locked. The belt will still retract to remove any slack in the shoulder belt.

The automatic locking mode is not available on the driver safety belt.

When to use the automatic locking mode

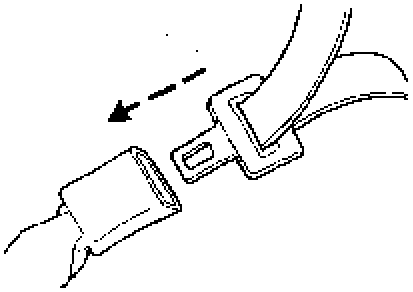
- **Anytime** a child safety seat is installed in a passenger front or outboard rear seating position with Regular Cab or SuperCab. SuperCrew models include the center seating position of the second row. Children 12 years old and under should be properly restrained in the rear seat whenever possible. Refer to *Safety Restraints for Children* or *Safety Seats for Children* later in this chapter.

[redacted]

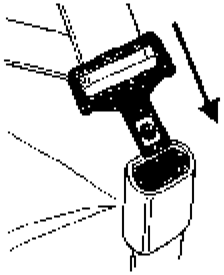
How to use the automatic locking mode

1. Buckle the combination lap and shoulder belt.

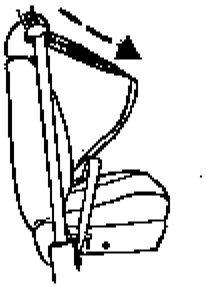
- Front seats



- Rear seats (if equipped)



2. Grasp the shoulder portion and pull downward until the entire belt is extracted.



3. Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

How to disengage the automatic locking mode

Disconnect the combination lap/shoulder belt and allow it to retract completely to disengage the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.

[redacted]

[redacted]

[redacted]

Safety belt pretensioner

Your vehicle is equipped with safety belt pretensioners at the driver and front outboard passenger seating positions.

The Seat Integrated Restraints (SIR) seat (which has shoulder belts attached to the corners of the front seat back) is equipped with a buckle pretensioner. Do NOT place objects between the seats, this could interfere with the functioning of the pretensioner. For the SuperCab and CrewCab base bench seats and all Regular Cab seating positions, the safety belts are equipped with a retractor pretensioner.

The safety belt pretensioners are designed to activate only during certain frontal or near-frontal collisions with sufficient longitudinal deceleration. A safety belt pretensioner is a device which tightens the webbing of the lap and shoulder belts during some collisions in such a way that they fit more snugly against the body.

The driver and front outboard passenger safety belt system (including retractors, buckles and height adjusters) must be replaced if the vehicle is involved in a collision that results in the activation of the safety belt pretensioners. Refer to the *Safety belt maintenance* section in this chapter.

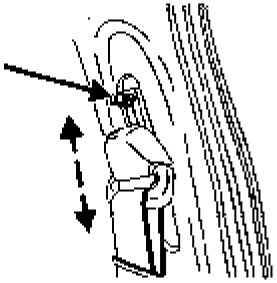
[redacted]

Front safety belt height adjustment (if equipped)

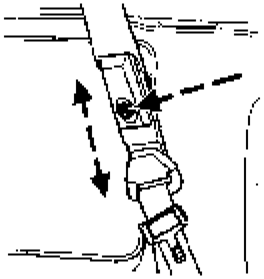
If your shoulder belts come out of the front seat back, you will not have a safety belt height adjuster.

Regular Cab and SuperCab vehicles have safety belt height adjustments for the driver and front passenger. SuperCrew vehicles have these adjustments for the driver, front passenger and rear outboard passengers. Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

- Regular Cab/4–door SuperCrew



- 4–door SuperCab (Bench seats only)



To lower the shoulder belt height, push the button and slide the height adjuster down. To raise the height of the shoulder belt, slide the height adjuster up. Pull down on the height adjuster to make sure it is locked in place.

⚠ [illegible]

Lap belts

Adjusting the lap belt

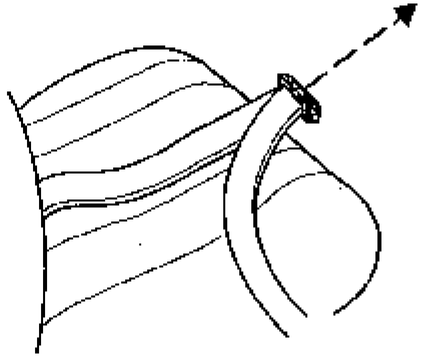
⚠ [illegible]

The center lap belt tongues are designed to fit only in the correct buckle. The tongue will not securely latch if you attempt to use it in any of the outboard seating position buckles. To ensure that you have used the correct buckle you should hear a snap and feel it latch.

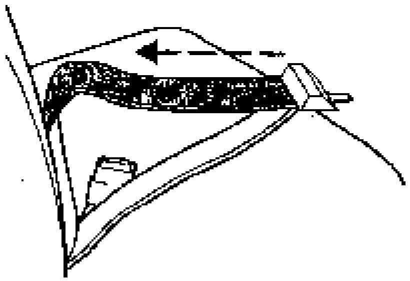
- **1st row center and 2nd row center (SuperCab) seating position**

The lap belt does not adjust automatically.

Insert the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). To lengthen the belt, turn the tongue at a right angle to the belt and pull across your lap until it reaches the buckle. To tighten the belt, pull the loose end of the belt through the tongue until it fits snugly across the hips.



Shorten and fasten the belt when not in use.



- **2nd row center seating position (SuperCrew)**

The lap belt will adjust automatically. To fasten, grasp the tongue, and with a continuous motion, pull out enough webbing to buckle the tongue into the correct buckle (the buckle closest to the direction the tongue is coming from). If you did not pull out enough webbing to reach the buckle, allow the tongue to retract fully before trying to pull it out again. The belt should fit snugly and as low as possible around your hips. Do not wear the lap belt around your waist.

Safety belt warning light and indicator chime

The safety belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

Conditions of operation

The driver's safety belt is not buckled before the ignition switch is turned to the ON position...	The safety belt warning light illuminates 1-2 minutes and the warning chime sounds 4-8 seconds.
The driver's safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt warning light and warning chime turn off.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The safety belt warning light and indicator chime remain off.

BeltMinder (if equipped)

The BeltMinder feature is a supplemental warning to the safety belt warning function. This feature provides additional reminders to the driver that the driver's safety belt is unbuckled by intermittently sounding a chime and illuminating the safety belt warning lamp in the instrument cluster.

The driver's safety belt is not buckled approximately 5 seconds after the safety belt warning light has turned off...	The BeltMinder feature is activated - the safety belt warning light illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until safety belt is buckled.
The driver's safety belt is buckled while the safety belt indicator light is illuminated and the safety belt warning chime is sounding...	The BeltMinder feature will not activate.
The driver's safety belt is buckled before the ignition switch is turned to the ON position...	The BeltMinder feature will not activate.

The following are reasons most often given for not wearing safety belts: (All statistics based on U.S. data)

"Crashes are rare events"	**36700 crashes occur every day.** The more we drive, the more we are exposed to "rare" events, even for good drivers. *1 in 4 of us will be seriously injured in a crash during our lifetime.*
"I'm not going far"	**3 of 4 fatal** crashes occur within **25** miles of home.
"Belts are uncomfortable"	We design our safety belts to enhance comfort. If you are uncomfortable - try different positions for the safety belt upper anchorage and seatback which should be as upright as possible; this can improve comfort.

"I was in a hurry"	**Prime time for an accident.** BeltMinder reminds us to take a few seconds to buckle up.
"Seat belts don't work"	**Safety belts,** when used properly, **reduce risk of death** to front seat occupants by **45% in cars,** and by **60% in light trucks.**
"Traffic is light"	**Nearly 1 of 2 deaths occur in single-vehicle crashes,** many when no other vehicles are around.
"Belts wrinkle my clothes"	Possibly, but a serious crash can do much more than wrinkle your clothes, particularly if you are unbelted.
"The people I'm with don't wear belts"	Set the example, teen deaths occur 4 times more often in vehicles with TWO or MORE people. Children and younger brothers/sisters imitate behavior they see.
"I have an air bag"	Air bags offer greater protection when used with safety belts. Frontal airbags are not designed to inflate in rear and side crashes or rollovers.
"I'd rather be thrown clear"	Not a good idea. **People** who are **ejected are 40 times more likely to DIE.** Safety belts help prevent ejection, WE CAN'T "PICK OUR CRASH".

One time disable

Any time the safety belt is buckled and then unbuckled during an ignition ON cycle, BeltMinder will be disabled for that ignition cycle only.

Deactivating/activating the BeltMinder feature

Read steps 1 - 9 thoroughly before proceeding with the deactivation/activation programming procedure.

The BeltMinder feature can be deactivated/activated by performing the following procedure:

Before following the procedure, make sure that:

- The parking brake is set.
- The gearshift is in P (Park) (automatic transmission) or the neutral position (manual transmission).
- The ignition switch is in the OFF position.
- All vehicle doors are closed.
- The driver's safety belt is unbuckled.
- The parklamps/headlamps are in OFF position (If vehicle is equipped with Autolamps, this will not affect the procedure).

BeltMinder activation and deactivation procedure

1. Turn the ignition switch to the RUN (or ON) position. (DO NOT START THE ENGINE.)

2. Wait until the safety belt warning light turns off. (Approximately 1–2 minutes.)

- Steps 3-5 must be completed within 60 seconds or the procedure will have to be repeated.

3. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled. This can be done before or during BeltMinder warning activation.

4. Turn on the parklamps/headlamps, turn off the parklamps/headlamps.

5. Buckle then unbuckle the safety belt three times, ending with the safety belt unbuckled.

- After step 5 the safety belt warning light will be turned on for three seconds.

6. Within seven seconds of the safety belt warning light turning off, buckle then unbuckle the safety belt.

- This will disable BeltMinder if it is currently enabled, or enable BeltMinder if it is currently disabled.

7. Confirmation of disabling BeltMinder is provided by the safety belt warning light flashing four times per second for three seconds.

8. Confirmation of enabling BeltMinder is provided by:

- The safety belt warning light flashing four times per second for three seconds.
- Followed by three seconds with the safety belt warning light off.
- Once again, the safety belt warning light will flash four times per second for three seconds.

9. After receiving confirmation, the deactivation/activation procedure is complete.

Safety belt extension assembly

If the safety belt is too short when fully extended, there is a 20 cm (8 inch) safety belt extension assembly that can be added (part number 611C22). This assembly can be obtained from your dealer at no cost.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended.

⚠ Do not use extensions to change the fit of the shoulder [illegible] across the [illegible]

Safety belt maintenance

Inspect the safety belt systems periodically to make sure they work properly and are not damaged. Inspect the safety belts to make sure there are no nicks, tears or cuts. Replace if necessary. All safety belt assemblies, including retractors, buckles, front seat belt buckle assemblies, buckle support assemblies (slide bar-if equipped), shoulder belt height adjusters (if equipped), shoulder belt guide on seatback (if equipped), child safety seat LATCH and tether anchors, and attaching hardware, should be inspected after a collision. Ford Motor Company recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

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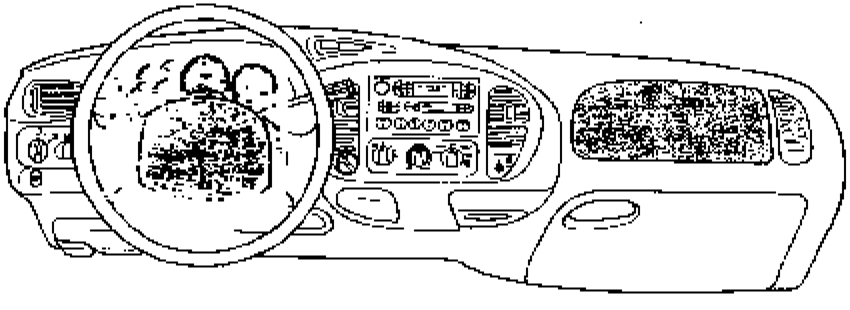
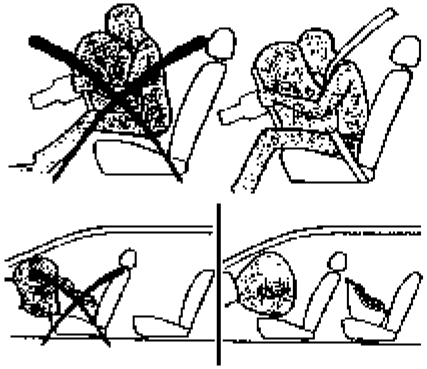
Refer to *Interior* in the *Cleaning* chapter.

AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



Important SRS precautions



The SRS is designed to work with the safety belt to help protect the driver and right front passenger from certain upper body injuries. Air bags DO NOT inflate slowly; there is a risk of injury from a deploying air bag.

⚠ All occupants of the vehicle, including the driver, should always properly wear their safety belts, even when an air bag (SRS) is provided.

[illegible]

[illegible]

[illegible]

To properly position yourself away from the air bag:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Recline the seat slightly one or two degrees from the upright position.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Children and air bags

For additional important safety information, read all information on safety restraints in this guide.

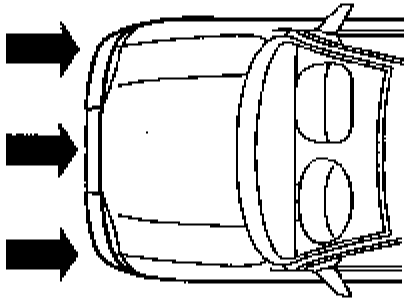
Children must always be properly restrained. Failure to follow these instructions may increase the risk of injury in a collision.

[illegible]

How does the air bag supplemental restraint system work?

The air bag SRS is designed to activate when the vehicle sustains sufficient longitudinal deceleration.

The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation. Air bags are designed to inflate in frontal and near-frontal collisions, not rollover, side-impact, or rear-impacts.



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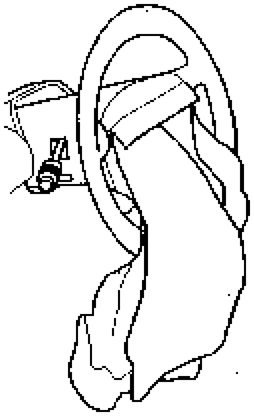

The air bags inflate and deflate rapidly upon activation. After air bag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (e.g., baking soda) that result from the combustion process that inflates the air bag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.

While the system is designed to help reduce serious injuries, it may also cause minor abrasions, swelling or temporary hearing loss. Because air bags must inflate rapidly and with considerable force, there is the risk of death or serious injuries such as fractures, facial and eye injuries or internal injuries, particularly to occupants who are not properly restrained or are otherwise out of position at the time of air bag deployment. Thus, it is extremely important that occupants be properly restrained as far away from the air bag module as possible while maintaining vehicle control.

[illegible]

[illegible]

The SRS consists of:

- driver and passenger air bag modules (which include the inflators and air bags),
- one or more impact and safing sensors, passenger air bag deactivation switch and diagnostic monitor (RCM)
- a readiness light and tone,
- and the electrical wiring which connects the components.

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The RCM (restraints control module) monitors its own internal circuits and the supplemental air bag electrical system warning (including the passenger air bag deactivation switch, the impact sensors, the system wiring, the air bag system readiness light, the air bag back up power and the air bag ignitors).

Determining if the system is operational

The SRS uses readiness lights in the instrument cluster and the passenger air bag deactivate switch or a tone to indicate the condition of the system. Refer to the *Air bag readiness* section in the *Instrument cluster* chapter or *Passenger air bag on/off switch* section in this chapter. Routine maintenance of the air bag is not required.

A difficulty with the system is indicated by one or more of the following:

- The readiness lights will either flash or stay lit.
- The readiness lights will not illuminate immediately after ignition is turned on.
- A series of five beeps will be heard. The tone pattern will repeat periodically until the problem and/or light are repaired.

If any of these things happen, even intermittently, have the SRS serviced at your dealership or by a qualified technician immediately. Unless serviced, the system may not function properly in the event of a collision.

Disposal of air bags and air bag equipped vehicles (including pretensioners)

See your local dealership or qualified technician. Air bags MUST BE disposed of by qualified personnel.

Passenger air bag ON/OFF switch (if equipped)

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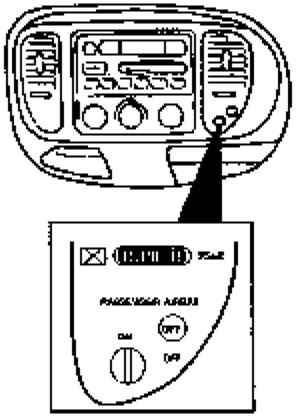
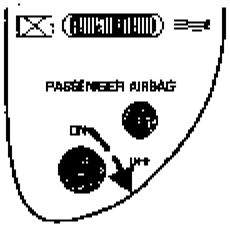


Turning the passenger air bag off

1. Insert the ignition key, turn the switch to OFF position and hold in OFF position while removing the key.

2. When the ignition is turned to the ON position the OFF light illuminates briefly, momentarily shuts off and then turns back on. This indicates that the passenger air bag is deactivated.



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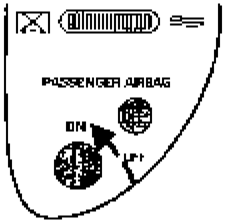
[illegible]

Turning the passenger air bag back on

The passenger air bag remains OFF until you turn it back ON.

1. Insert the ignition key and turn the switch to ON.

2. The OFF light will briefly illuminate when the ignition is turned to ON. This indicates that the passenger air bag is operational.



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The passenger side air bag should always be ON (the air bag OFF light should *not* be illuminated) unless the passenger is a person who meets the requirements stated either in Category 1, 2 or 3 of the NHTSA/Transport Canada deactivation criteria which follows.

[illegible]

The vast majority of drivers and passengers are much safer with an air bag than without. To do their job and reduce the risk of life threatening injuries, air bags must open with great force, and this force can pose a potentially deadly risk in some situations, particularly when a front seat occupant is not properly buckled up. The most effective way to reduce the risk of unnecessary air bag injuries without reducing the overall safety of the vehicle is to make sure all occupants are properly restrained in the vehicle, especially in the front seat. This provides the protection of safety belts and permits the air bags to provide the additional protection they were designed to provide. If you choose to deactivate your air bag, you are losing the very significant risk reducing benefits of the air bag and you are also reducing the effectiveness of the safety belts, because safety belts in modern vehicles are designed to work as a safety system with the air bags.

Read all air bag Warning labels in the vehicle as well as the other important air bag instructions and Warnings in this Owner's Guide.

NHTSA deactivation criteria (excluding Canada)

1. **Infant.** An infant (less than 1 year old) must ride in the front seat because:

- the vehicle has no rear seat;
- the vehicle has a rear seat too small to accommodate a rear-facing infant seat; or
- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front so that the driver can constantly monitor the child's condition.

2. **Child age 1 to 12.** A child age 1 to 12 must ride in the front seat because:

- the vehicle has no rear seat;
- although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must ride in the front because no space is available in the rear seat(s) of the vehicle; or
- the child has a medical condition which, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can constantly monitor the child's condition.

3. **Medical condition.** A passenger has a medical condition which, according to his or her physician:

- causes the passenger air bag to pose a special risk for the passenger; and
- makes the potential harm from the passenger air bag in a crash greater than the potential harm from turning OFF the air bag and allowing the passenger, even if belted, to hit the dashboard or windshield in a crash.

Transport Canada deactivation criteria (Canada Only)

1. **Infant:** An infant (less than 1 year old) must ride in the front seat because:

- my vehicle has no rear seat;
- the rear seat in my vehicle cannot accommodate a rear facing infant seat; or
- the infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can monitor the infant's condition.

2. **Child age 12 or under:** A child age 12 or under must ride in the front seat because:

- my vehicle has no rear seat;
- although children age 12 and under ride in the rear seat whenever possible, children age 12 and under have no option but to sometimes ride in the front seat because rear seat space is insufficient; or
- the child has a medical condition that, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can monitor the child's condition.

3. **Medical condition:** A passenger has a medical condition that, according to his or her physician:

- poses a special risk for the passenger if the air bag deploys; and
- makes the potential harm from the passenger air bag deployment greater than the potential harm from turning OFF the air bag and experiencing a crash without the protection offered by the air bag

SAFETY RESTRAINTS FOR CHILDREN

See the following sections for directions on how to properly use safety restraints for children. Also see *Air bag supplemental restraint system (SRS)* in this chapter for special instructions about using air bags.

Important child restraint precautions

You are required by law to use safety restraints for children in the U.S. and Canada. If small children (generally children who are four years old or younger and who weigh 18 kg [40 lbs] or less) ride in your vehicle, you must put them in safety seats made especially for children. Check your local and state or provincial laws for specific requirements regarding the safety of children in your vehicle. When possible, always place children under age 12 in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating position.

[illegible]

Always follow the instructions and warnings that come with any infant or child restraint you might use.

Children and safety belts

If the child is the proper size, restrain the child in a safety seat. Children who are too large for child safety seats (as specified by your child safety seat manufacturer) should always wear safety belts.

Follow all the important safety restraint and air bag precautions that apply to adult passengers in your vehicle.

If the shoulder belt portion of a combination lap and shoulder belt can be positioned so it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt. Moving the child closer to the center of the vehicle may help provide a good shoulder belt fit.

[illegible]

Child booster seats

Children outgrow a typical convertible or toddler seat when they weigh 40 pounds and are around 4 years of age. Although the lap/shoulder belt will provide some protection, these children are still too small for lap/shoulder belts to fit properly, which could increase the risk of serious injury.

To improve the fit of both the lap and shoulder belt on children who have outgrown child safety seats, Ford Motor Company recommends use of a belt-positioning booster.

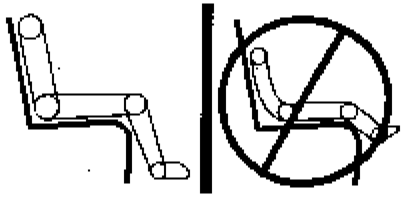
Booster seats position a child so that safety belts fit better. They lift the child up so that the lap belt rests low across the hips and the knees bend comfortably. Booster seats also make the shoulder belt fit better and more comfortably for growing children.

When children should use booster seats

Children need to use booster seats from the time they outgrow the toddler seat until they are big enough for the vehicle seat and lap/shoulder belt to fit properly. Generally this is when they weigh about 80 lbs (about 8 to 12 years old).

Booster seats should be used until you can answer YES to ALL of these questions:

- Can the child sit all the way back against the vehicle seat back with knees bent comfortably at the edge of the seat without slouching?



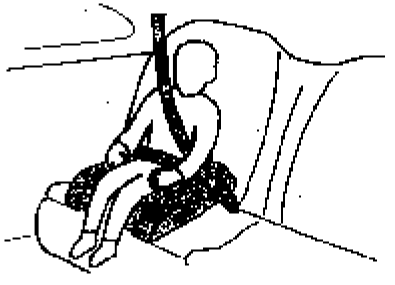
- Does the lap belt rest low across the hips?
- Is the shoulder belt centered on the shoulder and chest?
- Can the child stay seated like this for the whole trip?

Types of booster seats

There are two types of belt positioning booster seats:

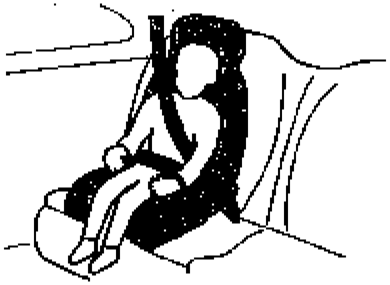
- Those that are backless.

  If your backless booster seat has a removable shield, remove the shield and use the lap/shoulder belt. If a seating position has a low seat back and no head restraint, a backless booster seat may place your child's head (top of ear level) above the top of the seat. In this case, move the backless booster to another seating position with a higher seat back and lap/shoulder belts.



- Those with a high back.

  If, with a backless booster seat, you cannot find a seating position that adequately supports your child's head, a high back booster seat would be a better choice.



Both can be used in any vehicle in a seating position equipped with lap/shoulder belts if your child is over 40 lbs.

The shoulder belt should cross the chest, resting snugly on the center of the shoulder. The lap belt should rest low and snug across the hips, never up high across the stomach.

If the booster seat slides on the vehicle seat, placing a rubberized mesh sold as shelf or carpet liner under the booster seat may improve this condition.

The importance of shoulder belts

Using a booster without a shoulder belt increases the risk of a child's head hitting a hard surface in a collision. For this reason, you should never use a booster seat with a lap belt only. It is best to use a booster seat with lap/shoulder belts in the back seat- the safest place for children to ride.

[redacted]

[redacted]

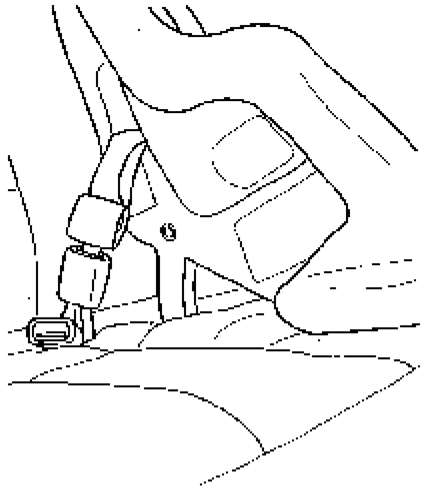
[redacted]

SAFETY SEATS FOR CHILDREN

Child and infant or child safety seats

Use a safety seat that is recommended for the size and weight of the child. Carefully follow all of the manufacturer's instructions with the safety seat you put in your vehicle. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

When installing a child safety seat:



- Review and follow the information presented in the *Air Bag Supplemental Restraint System* section in this chapter.
- Use the correct safety belt buckle for that seating position (the buckle closest to the direction the tongue is coming from).
- Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened in the buckle.
- Keep the buckle release button pointing up and away from the safety seat, with the tongue between the child seat and the release button, to prevent accidental unbuckling.
- Place seat back in upright position.

- Put the safety belt in the automatic locking mode. Refer to *Automatic locking mode* (passenger side front and outboard rear seating positions-Regular Cab and SuperCab) (passenger side front and rear seating positions-SuperCrew) (if equipped).

Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. For more information on top tether straps, refer to *Attaching safety seats with tether straps.*

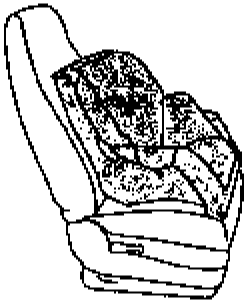
⚠ [illegible]

Installing child safety seats with combination lap and shoulder belts

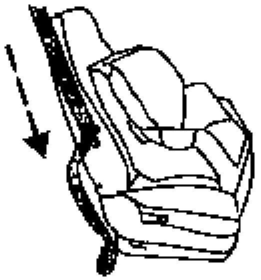
⚠ [illegible]

⚠ Children 12 and under should [illegible] seat whenever possible.

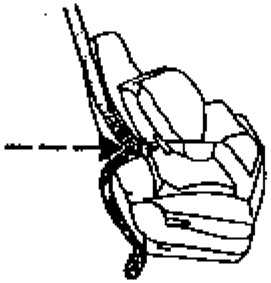
1. Position the child safety seat in a seat with a combination lap and shoulder belt.



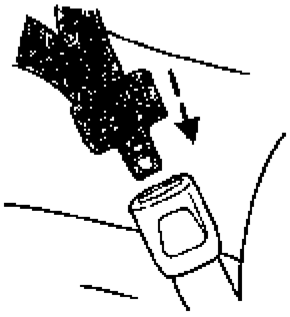
2. Pull down on the shoulder belt and then grasp the shoulder belt and lap belt together.

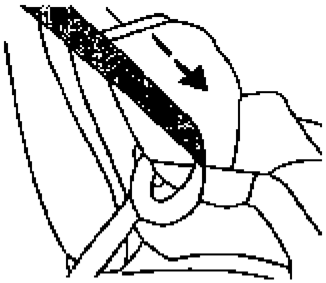


3. While holding the shoulder and lap belt portions together, route the tongue through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.



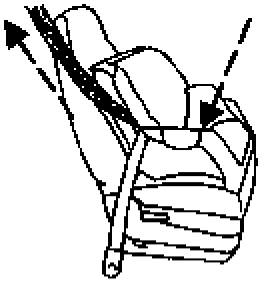
4. Insert the belt tongue into the proper buckle (the buckle closest to the direction the tongue is coming from) for that seating position until you hear a snap and feel the latch engage. Make sure the tongue is latched securely by pulling on it.



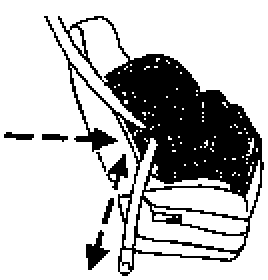


5. To put the retractor in the automatic locking mode, grasp the shoulder portion of the belt and pull downward until all of the belt is pulled out and a click is heard.

6. Allow the belt to retract. The belt will click as it retracts to indicate it is in the automatic locking mode.



7. Pull the lap belt portion across the child seat toward the buckle and pull up on the shoulder belt while pushing down with your knee on the child seat.



8. Allow the safety belt to retract to remove any slack in the belt.

9. Before placing the child in the seat, forcibly move the seat forward and back to make sure the seat is securely held in place. To check this, grab the seat at the belt path and attempt to move it side to side and forward. There should be no more than one inch of movement for proper installation.

10. Try to pull the belt out of the retractor to make sure the retractor is in the automatic locking mode (you should not be able to pull more belt out). If the retractor is not locked, unbuckle the belt and repeat steps two through nine.

Check to make sure the child seat is properly secured before each use.

Installing child safety seats in the front row lap belt seating positions

1. Lengthen the lap belt. To lengthen the belt, hold the tongue so that its bottom is perpendicular to the direction of webbing while sliding the tongue up the webbing.

2. Place the child safety seat in the center seating position.

3. Route the tongue and webbing through the child seat according to the child seat manufacturer's instructions.

4. Insert the belt tongue into the proper buckle for the center seating position until you hear a snap and feel it latch. Make sure the tongue is securely fastened to the buckle by pulling on tongue.

5. Push down on the child seat while pulling on the loose end of the lap belt webbing to tighten the belt.

6. Before placing the child into the child seat, forcibly tilt the child seat from side to side and in forward direction to make sure that the seat is held securely in place. If the child seat moves excessively, repeat steps 5 through 6, or properly install the child seat in a different position.

Installing child safety seat in the second row center seating position with an automatic locking retractor

1. Place the child safety seat in the center seating position.

2. In a continuous motion, pull out enough webbing from the retractor to route the tongue through the child seat.

3. While holding the webbing to prevent it from retracting, route the webbing through the child seat according to the child seat manufacturer's instructions. Be sure the belt webbing is not twisted.

4. Insert the tongue into the correct buckle for that seating position until you hear and feel the buckle engage. Make sure the buckle is latched securely by pulling on the webbing.

5. If you have not pulled out enough webbing to reach, allow the webbing to fully retract before attempting to pull it out again and repeat steps 2 through 4.

6. Pull the webbing through the child seat toward the retractor while pushing down with your knee on the child seat.

7. Allow the safety belt to retract to remove any slack in the belt. It will make a clicking noise while doing this.

8. Before placing the child in the seat, forcibly move the seat forward and side-to-side to make sure the seat is securely held in place.

9. Check to make sure the child seat is properly secured before each use.

Attaching child safety seats with tether straps

Most new forward-facing child safety seats include a tether strap which goes over the back of the seat and hooks to an anchoring point. Tether straps are available as an accessory for many older safety seats. Contact the manufacturer of your child seat for information about ordering a tether strap.

The passenger seats of your vehicle are equipped with built-in tether strap anchors located behind the seats as described below.

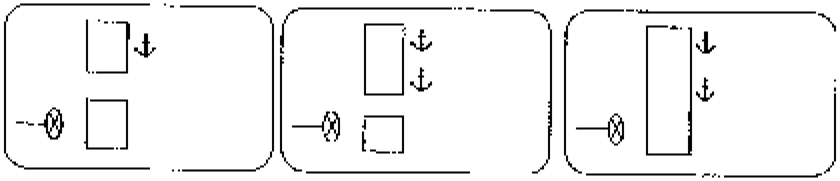
The tether anchors in your vehicle may be straps on the seatback or an anchor bracket on the rear edge of the seat cushion.

The rear seat of the SuperCab has three straps behind the top of the seatback that function as both routing loops for the tether straps and anchor loops.

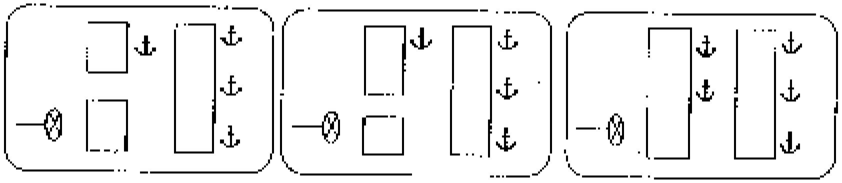
The tether strap anchors in your vehicle are in the following positions (shown from top view):

Attach the tether strap only to the appropriate tether anchor as shown. The tether strap may not work properly if attached somewhere other than the correct tether anchor.

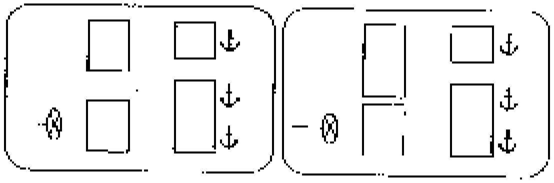
- **F150 Regular Cab**



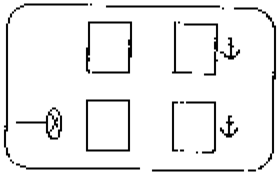
- **F150 SuperCab**



- **F150 SuperCrew**



- **F150 SuperCrew with quad buckets**



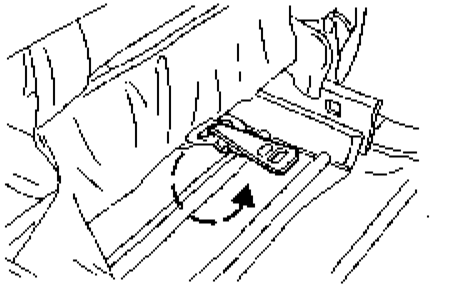
Tether strap attachment

1. Position the child safety seat on the seat cushion.
2. Route the child safety seat tether strap over the back of the seat.
3. Locate the correct anchor for the selected seating position.

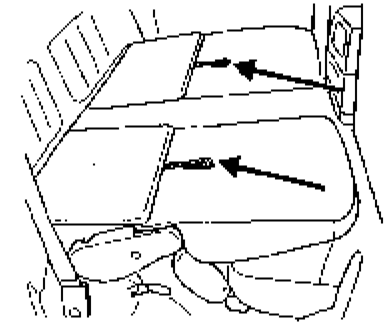
- You may need to pull the seatback forward to access the tether anchors. Make sure the seatback is locked in the upright position before installing the child seat. Refer to the *Folding Down The Rear Seats* section in this chapter for information on how to operate the rear seats.

4. Clip the tether strap to the anchor as shown.

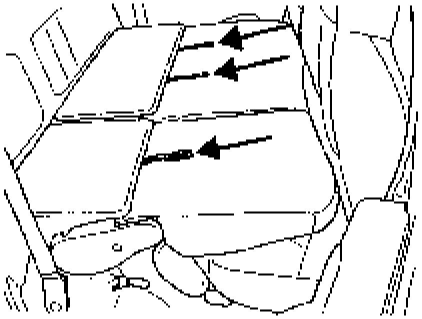
- Front seat (Regular Cab and SuperCab only)

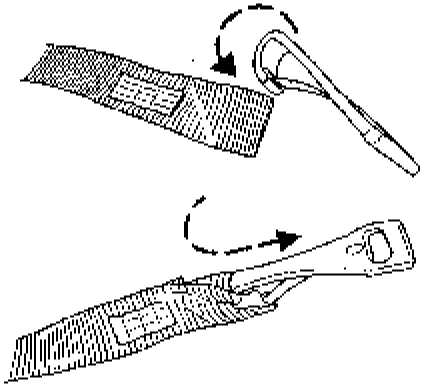


- Rear seats (with quad buckets only)



- Rear seats (SuperCrew only)





5. Refer to the *Installing child safety seats in combination lap and shoulder belt seating positions* section of this chapter for further instructions to secure the child safety seat.

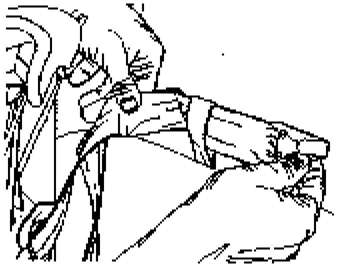
6. Tighten the child safety seat tether strap according to the manufacturer's instructions.

Tether strap attachment rear SuperCab only

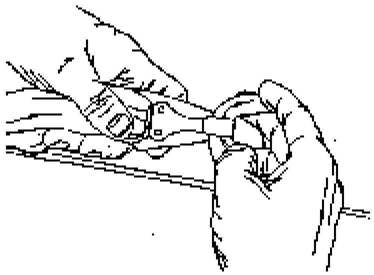
There are three loops of webbing just above the back of the rear seat (along the bottom edge of the rear window) in the SuperCab. These loops are to be used as both routing loops and anchor loops for child safety seat tether straps. For example, the center loop can be used as a routing loop for a child safety seat in the center rear seat and as an anchoring loop for child seats installed in the outboard rear seats.

Many tether straps cannot be tightened if the tether strap is hooked to the loop directly behind the child seat. To provide a tight tether strap:

1. Route the tether strap through the loop directly behind the child seat.

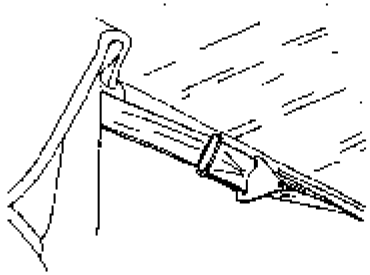


2. Attach the strap hook onto the loop behind an adjacent seating position.



3. Install the child safety seat tightly using the safety belts. Follow the instructions in this chapter.

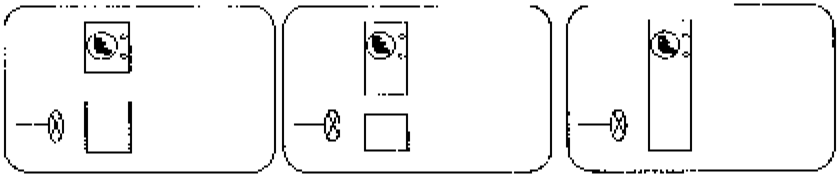
4. Tighten the tether strap according to the child seat manufacturer's instructions.



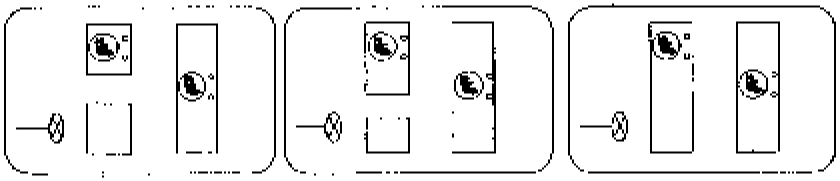
Attaching safety seats with LATCH (Lower Anchors and Tethers for Children) attachments for child seat anchors (if equipped)

Some child safety seats have two rigid or webbing mounted attachments that connect to two anchors at certain seating positions in your vehicle. This type of child seat eliminates the need to use seat belts to attach the child seat. For forward-facing child seats, the tether strap must also be attached to the proper tether anchor. See *Attaching safety seats with tether straps* in this chapter.

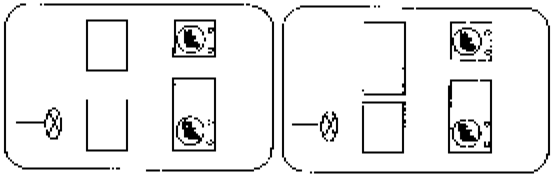
Your vehicle be equipped with LATCH anchors for child seat installation at the following seating positions:



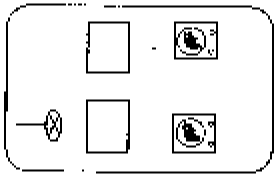
- F150 Regular Cab



- F150 Supercab



- F150 SuperCrew



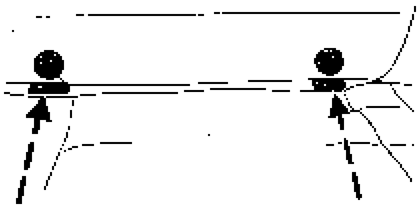
- F150 SuperCrew with Quad Buckets

The anchors on both sides of the center of the SuperCrew rear seat are provided only for child seats at the outboard seats. These anchors are further apart than the pairs of lower anchors for child seat installation at other seats. DO NOT install child seats with LATCH attachments (rigid or mounted on belt webbing) to the lower anchors at the center rear seat. If you install a child seat at the center rear position, use the vehicle lap belt and the top tether anchor.

Connectors on the LATCH child seat and the child seat instructions may use the symbol shown here. Your vehicle seat may have plain buttons, instead of this symbol, to indicate the location of the LATCH lower anchors.

[illegible]

[illegible]



The lower anchors for child seat installation are located at the rear section of the seat between the cushion and seat back. The LATCH anchors are below the locator buttons (if provided) on the seat back.

Follow the child seat manufacturer's instructions to properly install a child seat with LATCH attachments.

[illegible]

If you install a child seat with rigid LATCH attachments, do not tighten the tether strap enough to lift the child seat off the vehicle seat cushion when the child is seated in it. Keep the tether strap just snug without lifting the front of the child seat. Keeping the child seat just touching the vehicle seat gives the best protection in a severe crash.

Each time you use the safety seat, check that the seat is properly attached to the lower anchors and tether anchor. Try to tilt the child seat from side to side. Also try to tug the seat forward. Check to see if the anchors hold the seat in place.

[illegible]

Appendix D

Miscellaneous Test Information

Channel Report

Name of Test 030110-1 **System** K3600 **Name of DAU** DAU0

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal. Date/Status		Group	Mfg.	Model
0000	EVENT	EVENT	T- 0		10.24 V	+	10/15/2002	OK	-1	TRC	Event
0001	C15351	SLDXG	Sled X - axis acceleration	RR	199.8828811 g	-	01/09/2003	OK	-1	Endevco	7231C
0002	C15519	SLDXGR	Sled X - axis acceleration	RR	200.2777288 g	-	01/09/2003	OK	-1	Endevco	7231C
0003	SLDXV	SLDXV	Measured Velocity		164.6408129 km/h	-	04/08/2002	OK	-1	TRC	SLDXV
0004	SLDXGT	SLDXGT	Sled X-axis Acceleration for	RR	195.5131266 g	-	01/09/2003	OK	-1	Endevco	7231C
0006	AD4J7	HEDYG1	Head Y - axis acceleration	Left	399.0335905 g	-	11/14/2002	OK	230n	Endevco	7231C
0007	AD4J8	HEDZG1	Head Z - axis acceleration	Up	399.4632212 g	-	11/14/2002	OK	230n	Endevco	7231C
0008	1716-0235-FX	NEKXF1	Neck X - axis Shear Force	Hd	8903.774810 N	-	11/14/2002	OK	230n	Denton	1716
0009	1716-0235-FY	NEKYF1	Neck Y - axis Shear Force	Hd	8890.769842 N	+	11/14/2002	OK	230n	Denton	1716
0010	1716-0235-FZ	NEKZF1	Neck Z - axis Shear Force	Hd	13345.70000 N	+	11/14/2002	OK	230n	Denton	1716
0011	1716-0235-MX	NEKXM1	Neck Moment about X - axis	Rt Ear	282.6733514 N·m	-	11/14/2002	OK	230n	Denton	1716
0012	1716-0235-MY	NEKYM1	Neck Moment about Y - axis	Chn	282.6477513 N·m	+	11/14/2002	OK	230n	Denton	1716
0013	1716-0235-MZ	NEKZM1	Neck Moment about Z - axis	Chn	282.8104526 N·m	-	11/14/2002	OK	230n	Denton	1716
0014	ACTR4	CSTXG1	Chest X - axis acceleration	Fwd	398.6297103 g	+	11/14/2002	OK	230n	Endevco	7231C
0015	ACTT4	CSTYG1	Chest Y - axis acceleration	Left	400.5852299 g	-	11/14/2002	OK	230n	Endevco	7231C
0016	ACTW0	CSTZG1	Chest Z - axis acceleration	Down	399.4382899 g	-	11/14/2002	OK	230n	Endevco	7231C
0017	85427-1	CSTXD1	Chest Deflection	Strnm	100.2712415 mm	+	11/18/2002	OK	230n	Servo	14CB1-2847
0018	2430T-984	LFMZF1	Left Femur Force	Knee	13357.47070 N	+	11/14/2002	OK	230n	GSE	2430T
0019	2430T-985	RFMZF1	Right Femur Force	Knee	13354.84855 N	+	11/14/2002	OK	230n	GSE	2430T
0020	APDJ3	HEDXG2	Head X - axis acceleration	Rwd	400.3471760 g	-	12/26/2002	OK	314n	Endevco	7231C
0021	AGHP8	HEDYG2	Head Y - axis acceleration	Left	399.2576303 g	-	12/26/2002	OK	314n	Endevco	7231C
0022	APD60	HEDZG2	Head Z - axis acceleration	Up	401.2146145 g	-	12/26/2002	OK	314n	Endevco	7231C
0023	1716A-1221-FX	NEKXF2	Neck X - axis Shear Force	Hd	8895.062154 N	-	12/26/2002	OK	314n	Denton	1716A
0024	1716A-1221-FY	NEKYF2	Neck Y - axis Shear Force	Hd	8889.300790 N	+	12/26/2002	OK	314n	Denton	1716A
0025	1716A-1221-FZ	NEKZF2	Neck Z - axis Shear Force	Hd	13350.07202 N	+	12/26/2002	OK	314n	Denton	1716A
0026	1716A-1221-MX	NEKXM2	Neck Moment about X - axis	Rt Ear	282.4298268 N·m	-	12/26/2002	OK	314n	Denton	1716A
0027	1716A-1221-MY	NEKYM2	Neck Moment about Y - axis	Chn	282.6254107 N·m	+	12/26/2002	OK	314n	Denton	1716A
0028	1716A-1221-MZ	NEKZM2	Neck Moment about Z - axis	Chn	282.7948080 N·m	+	12/26/2002	OK	314n	Denton	1716A
0029	C13010	CSTXG2	Chest X - axis acceleration	Fwd	398.4466805 g	+	12/26/2002	OK	314n	Endevco	7231C
0030	C14563	CSTYG2	Chest Y - axis acceleration	Left	399.4289414 g	-	12/26/2002	OK	314n	Endevco	7231C

Channel Report

01/10/2003 1:49:49 PM

0031	AD343	CSTZG2	Chest Z - axis acceleration	Down	398.8470826 g	+	12/26/2002	OK	314n	Endevco	7231C
0032	14CB1-2847-041	CSTXD2	Chest Deflection	Strom	100.5192841 mm	+	01/06/2003	OK	314n	Servo	14CB1-2847
0033	2430T-962	LFMZF2	Left Femur Force	Knee	13347.40580 N	+	12/26/2002	OK	314n	GSE	2430T
0034	2430T-982	RFMZF2	Right Femur Force	Knee	13345.59042 N	+	12/26/2002	OK	314n	GSE	2430T
0035	P24524	TEXG	Top of Engine Block	Fwd	199.8836614 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0036	P21652	RAXG	Rear Axle	Rr	199.9476699 g	-	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0037	P21635	LFXG	Left Vehicle Frame	Fwd	200.2624533 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0038	P25261	RFXG	Right Vehicle Frame	Fwd	200.1172562 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0039	AD4H9	HEDXG1	Head X - axis acceleration	Rear	398.4931975 g	-	11/14/2002	OK	230n	Endevco	7231C
0040	P24564	LBXG	Left Body @ Rear Seat	Fwd	200.0488400 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180
0041	P24393	RBXG	Right Body @ Rear Seat	Fwd	199.8661053 g	+	11/21/2002	OK	-1	Endevco	7264C-2K-2-180

page 2 of 2

Digital and System Channel Report

2003-01-09 19:05:52

Name of Test 030110-1 **System** K3600 **Name of DAU** DAU0 **description**

enabled	Channel	Short Name	Type	Data File	Module Type
Yes	0500	Dig0	dig0	DA100500	KM3650 Sequencer

bit position	bit selector	short name	long name	description	
MSB = bit 15	1	Backup	Pull Apart Switch		
bit 14	1	ABEVT1	AIRBAG EVENT DP	20 mS	1
bit 13	1	ABEVT3	AIRBAG EVENT PP	20 mS	2
bit 12	0				
bit 11	0				
bit 10	0				
bit 09	0				
bit 08	0				
bit 07	0				
bit 06	0				
bit 05	0				
bit 04	0				
bit 03	0				
bit 02	0				
bit 01	0				
LSB = bit 00	0				

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Dummy 230n **Type** HYBRID III 50TH **Description** NHTSA - 230n HYBRID III 50TH. CAL DUE 5-14-03 (DKS 1-23-03)J211

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U		Fullscale	Caldate	Pos Output	Flip
HEDXG	Head Accel X	7231C	AD4H9	Endevco	0.01992	g	750	11/14/02	Rear	1
HEDYG	Head Accel Y	7231C	AD4J7	Endevco	0.01974	g	750	11/14/02	Left	1
HEDZG	Head Accel Z	7231C	AD4J8	Endevco	0.01942	g	750	11/14/02	Up	1
NEKXF	Neck Force X	1716	1716-0235-FX	Denton	0.000191999	N	8896.4	11/14/02	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716	1716-0235-FY	Denton	0.000185468	N	8896.4	11/14/02	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716	1716-0235-FZ	Denton	0.000093686	N	13344.6	11/14/02	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716	1716-0235-MX	Denton	0.005842832	N·m	282.5	11/14/02	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716	1716-0235-MY	Denton	0.005910088	N·m	282.5	11/14/02	Chn to Strnm	0
NEKZM	Neck Moment Z	1716	1716-0235-MZ	Denton	0.008362124	N·m	282.5	11/14/02	Chn to Lt Shld	0
CSTXG	Chest Accel X	7231C	ACTR4	Endevco	0.01976	g	750	11/14/02	Fwd	0
CSTYG	Chest Accel Y	7231C	ACTT4	Endevco	0.01922	g	750	11/14/02	Left	1
CSTZG	Chest Accel Z	7231C	ACTW0	Endevco	0.01972	g	750	11/14/02	Down	0
CSTXD	Chest Deflection X	14CB1-2847	85427-1	Servo	1.1347	mm	100	11/18/02	Strnm Away Frm Spn	0
LFMZF	Left Femur Force Z 60	2430T	2430T-984	GSE	0.000071646	N	13344.7	11/14/02	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z S1511	2430T	2430T-985	GSE	0.000070088	N	13344.7	11/14/02	Knee Fd,Pel Rr	0

Dummy 314n **Type** HYBRID III 50TH **Description** NHTSA - 314n HYBRID III 50TH. CAL DUE 6-26-03(DKS 12-31-02)J211

Chsname	Location	Model	Name	Manufacturer	Sens./mV/V/U		Fullscale	Caldate	Pos Output	Flip
HEDXG	Head Accel X	7231C	APDJ3	Endevco	0.02014	g	750	12/26/02	Rwd	1
HEDYG	Head Accel Y	7231C	AGHP8	Endevco	0.01914	g	750	12/26/02	Left	1
HEDZG	Head Accel Y	7231C	APD60	Endevco	0.02075	g	750	12/26/02	Up	1
NEKXF	Neck Force X	1716A	1716A-1221-FX	Denton	0.00019545	N	8896.4	12/26/02	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1221-FY	Denton	0.000186098	N	8896.4	12/26/02	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1221-FZ	Denton	0.000099486	N	13344.6	12/26/02	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1221-MX	Denton	0.006063009	N·m	282.5	12/26/02	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1221-MY	Denton	0.00588177	N·m	282.5	12/26/02	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1221-MZ	Denton	0.00852	N·m	282.5	12/26/02	Chn to Lt Shld	0
CSTXG	Chest Accel X	7231C	C13010	Endevco	0.02954	g	750	12/26/02	Fwd	0
CSTYG	Chest Accel Y	7231C	C14563	Endevco	0.02981	g	750	12/26/02	Left	1
CSTZG	Chest Accel Z	7231C	AD343	Endevco	0.01945	g	750	12/26/02	Down	0
CSTXD	Chest Deflection X	14CB1-2847	14CB1-2847-041	Servo	1.1319	mm	100	1/6/03	Strnm Away Frm Spn	0
LFMZF	Left Femur Force Z 91	2430T	2430T-962	GSE	0.000069241	N	13344.7	12/26/02	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z 98	2430T	2430T-982	GSE	0.000068754	N	13344.7	12/26/02	Knee Fd,Pel Rr	0

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